

GenCore version 5.1.4\_p5\_4578  
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OM nucleic - nucleic search, using sw model

Run on: April 1, 2003, 01:06:32 ; Search time 1354 Seconds

(without alignments)  
6014.199 Million cell updates/sec

Title: US-09-924-946-1

Perfect score: 3616

Sequence: 1 gattatgttgggggtggc.....gttgctcattggactgct 3616

Scoring table: IDENTITY NUC

Gapop 10.0 , Gapext 1.0

Searched: 2185239 seqs, 1125999159 residues

Total number of hits satisfying chosen parameters: 4370478

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database : N Geneseq\_101002.\*

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- 2: /SIDSI/gcgdata/geneseq/geneseq-emb1/NA1981.DAT.\*
- 3: /SIDSI/gcgdata/geneseq/geneseq-emb1/NA1982.DAT.\*
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- 21: /SIDSI/gcgdata/geneseq/geneseq-emb1/NA2000.DAT.\*
- 22: /SIDSI/gcgdata/geneseq/geneseq-emb1/NA2001A.DAT.\*
- 23: /SIDSI/gcgdata/geneseq/geneseq-emb1/NA2001B.DAT.\*
- 24: /SIDSI/gcgdata/geneseq/geneseq-emb1/NA2002.DAT.\*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Query Match	Score	Length	ID	Description
1	3616	100.0	3616	24	Human endothelial
2	3436	95.0	3532	24	Human lysyl oxidase
3	2844.4	78.7	2976	24	Human 47765 lysyl
4	2597.2	71.8	2603	24	Human drug metabol
5	2263.2	62.6	2268	24	Human 47765 lysyl
6	1918.8	53.1	3767	21	Polynucleotide iso
7	1718.2	47.5	1782	21	Clone HOHEC84 codi
8	1718.2	47.5	1782	21	Human secreted pro
9	1711.4	47.3	1781	21	Clone HOHEC84 codi

10	853.8	23.6	3748	23	ABV23110	Human prostate exp
11	853.8	23.6	3748	23	ABV28948	Human prostate exp
12	849	23.5	3432	24	ABQ88183	Human osteoblast d
13	847.4	23.4	2325	24	ABA95142	Human LOR-1 protei
14	811.6	22.4	3467	22	AAH98714	Human EST-derived
15	787.4	21.8	2714	22	AAI19235	Human lipid metabo
16	765.8	21.2	2262	21	AAA47799	Human lysyl oxidas
17	765.8	21.2	2262	22	AAI167193	Nucleotide sequenc
18	765.8	21.2	2785	24	AAA24786	Human secreted pro
19	765.8	21.2	2920	21	AAA47798	Human lysyl oxidas
20	765.8	21.2	3121	24	AAI67788	Human lysyl oxidas
21	764.8	21.2	2262	24	ABA95143	Human lysyl-oxidas
22	762.6	21.1	5059	22	AAI19230	Human CGI53 (or C5
23	709	19.6	2420	22	AAI19222	Human CGI53 (or C5
24	706.2	19.5	3198	22	AAH81777	Human differential
25	706.2	19.5	3198	24	ABQ88184	Human osteoblast d
26	706.2	19.5	3198	24	AAI67787	Human lysyl oxidas
27	681.4	18.8	2860	21	AAAG1292	Human secreted pro
28	641.4	17.7	2130	21	AAA61266	Human secreted pro
29	581	16.1	4552	22	AAI19231	Human CGI53 (or C5
30	502.2	13.9	597	24	ABL79085	Human ovarian canc
31	450.2	12.5	460	24	ABN94644	Gene #1142 used to
32	403	11.1	1419	24	ABK15350	cDNA encoding huma
33	322	8.9	327	21	AAH87730	Human TSC33 cDNA.
34	239.6	6.6	513	22	AAH81629	Human differential
35	199.8	5.5	1536	23	ABL07603	Drosophila melanog
36	199.2	5.5	2476	20	AAH87159	Human protease HUP
37	191.6	5.3	1725	24	ABA95144	Human lysyl-oxidas
38	191.6	5.3	2328	24	AAI67786	Human lysyl oxidas
39	184.6	5.1	187	21	AAH87729	Human TSC33 cDNA f
40	159.4	4.4	643	23	ABV44017	Human prostate exp
41	146.6	4.1	1089	23	ABL03581	Drosophila melanog
42	145.8	4.0	1251	19	AAV19962	Homo sapiens lysyl
43	145.8	4.0	1254	24	ABA95145	Human lysyl-oxidas
44	145.8	4.0	2947	22	AAI26448	Human breast cance
45	145.8	4.0	2947	22	AAI26765	Human breast cance

ALIGNMENTS

RESULT 1  
AAD30517  
ID AAD30517 standard; cDNA; 3616 BP.

XX AAD30517;  
AC AAD30517;  
XX 31-MAY-2002 (first entry)  
XX Human endothelial estrogen regulated (EER)-7 cDNA.

Human; lysyl oxidase; LO gene; endothelial estrogen regulated gene; AAA;  
abdominal aortic aneurysms; EER-7 gene; myocardial infraction; elastin;  
KW fibrotic disease; gene therapy; cardiant; ss.

XX Homo sapiens.  
XX Key Location/Qualifiers  
XX CDS 120...2390  
FT /\*tag= a  
FT /product= "Human EER-7 protein"

XX WO200212470-A2.

XX 14-FEB-2002.

XX 08-AUG-2001; 2001WO-US24942.

XX 08-AUG-2000; 2000US-223763P.

XX 15-DEC-2000; 2000US-255838P.

XX (AMHP ) AMERICAN HOME PROD CORP.

PI Evans MJ, Scicchitano MS, Bapat AR, Beer E, Bhat RA, Ferris E;  
 PI Mastromeni R, Zhang J, Karathanasis SK;  
 XX WPI: 2002-227150/28.  
 DR P-PSDB; AAE19380.  
 XX Novel isolated endothelial estrogen regulated gene protein comprising  
 PT lysyl oxidase activity and conserved catalytic domain of lysyl oxidase,  
 PT useful as target to treat abdominal aortic aneurysms, myocardial  
 PT infarction -  
 XX  
 XX Claim 12: Page 61-62; 68pp; English.  
 XX The patent discloses novel lysyl oxidase (LO) genes, termed endothelial  
 CC estrogen regulated (EER)-7 genes and their corresponding proteins. The  
 CC invention also relates to an assay system to identify compounds that  
 CC selectively modulate EER7 protein activity by interaction with estrogen  
 CC receptors. Stimulation of LO enzyme activity of EER-7 acts as a target  
 CC for abdominal aortic aneurysms (AAA) and myocardial infarctions. Increase  
 CC in EER-7 lysyl oxidase activity increases elastin cross-linking in the  
 CC inner elastic lamina which prevents development of aneurysms. Increased  
 CC tensile strength of vessel wall which also prevents aneurysms. Myocardial  
 CC infarction is prevented by inhibiting rupture of fibrous cap that covers  
 CC plaque in the coronary vessels. Increased tensile strength of the cap,  
 CC resulting from increased LO activity helps preventing the infarctions.  
 CC Inhibition of LO activity is useful for treating fibrotic diseases.  
 CC Stimulation of EER-7 proteins are useful for treating patients with  
 CC estrogen-related disease states. Genetic variants of EER-7 can be  
 CC detected to diagnose an EER-7 associated disease such as AAA or  
 CC myocardial infarction. EER-7 polynucleotides are useful in gene  
 CC therapy. The present sequence is a cDNA encoding human EER-7 protein.  
 XX  
 SQ Sequence 3616 BP; 813 A; 997 C; 1065 G; 741 T; 0 other;

Query Match 100.0%; Score 3616; DB 24; Length 3616;  
 Best Local Similarity 100.0%; Pred. No. 0;  
 Matches 3616; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

481 ACTGAGTCACTCAGAAGACGTAGGGGTGATATGCCACCCCGGGCGCATCGTGGCTACC 540  
 541 TTTGTAAACTGTCTCCAAATGCCCTTGGGCCCCAGGGGCGCGGGCTGGAGAGGTGGGC 600  
 541 TTTCTGAAACTGTCTCCAAATGCCCTTGGGCCCCAGGGGCGCGGGCTGGAGAGGTGGGC 600  
 601 TCAAGCCCATCTTTGCCAGTCCCAAGCAGCATAGCCAGTGAACGAGGAGCCCTGGAGG 660  
 601 TCAAGCCCATCTTTGCCAGTCCCAAGCAGCATAGCCAGTGAACGAGGAGCCCTGGAGG 660  
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 661 TCAAGTATGAGGCGCATCTGGCGGACAGTGTGTGACCAAGCTGTGACCAAGCTGTG 720  
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 721 GGGTGGTGTGGGGATGTGTGGCTTCCCAAGCAGGTGTGTGTGACAGCCACTACTACA 780  
 781 GGAAGTCTGGGATCTGAAGATGAGGGACCCCTAAGTCTTAAGTCTTAAGTCTTAAG 840  
 781 GGAAGTCTGGGATCTGAAGATGAGGGACCCCTAAGTCTTAAGTCTTAAGTCTTAAG 840  
 841 AGAATCTCTTGGATCCACCAAGTCACTGCTGGGGAAGAGCCCCACATGGTCAACT 900  
 841 AGAATCTCTTGGATCCACCAAGTCACTGCTGGGGAAGAGCCCCACATGGTCAACT 900  
 901 GCCAGTGTGAGTGTGCTCAGCCCGGGCAAGCTGCGGCAGCTGCGGCAGCTGCGGCAG 960  
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 1021 GCAAGGGTCTGGGAGAGGAGCCGAGGCTGCGCTGCTGCTCCGGGCCAGGTGGGCG 1080  
 1021 GCAAGGGTCTGGGAGAGGAGCCGAGGCTGCGCTGCTGCTCCGGGCCAGGTGGGCG 1080  
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 1081 AGGGCCGGGTGGAAGTGTCTCAACCCGCGCAGTGGGGCAAGTGTGTGACCAAGTGA 1140  
 1141 ACCTCATCTCTGCCAGTGTGTGTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCT 1200  
 1141 ACCTCATCTCTGCCAGTGTGTGTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCT 1200  
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 1201 TCTTTGGGCGCGGCTGGGCGCAAGGCTAGGGCCATCCACCTGAGTGAAGTGGCTGCA 1260  
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Db 1621 AGCTGGCCCTGCGACAGTGGCCAGAGGCAACGCGGCGGCGGCGACTGCTGCCACGCTGGGCGGCG 1680  
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Db 1681 GCTTCCTGGCTGGAGTCTCTGCGATGACAGTGCACAGACCTGGTGATCAAGCCGCGAGC 1740  
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QY 1801 AGGAGAACTGCTCTCAAGTCTCGGATCACATGGAATCGGCCCTACGGATACCGCGGCC 1860  
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QY 1861 TATTGCCCTCTCCACACAGATCTACAACTGCGGCCGAGTGTCTGTCGTCGAAGACTG 1920  
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QY 1921 GACCGGATAGTGGGTTGGCAGCAGTGCACAGGCAATACACAGCAATGAGGTCTTCA 1980  
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QY 3601 CTCATTATGAGTGTCT 3616  
Db 3601 CTCATTATGAGTGTCT 3616

RESULT 2  
AAI67789  
ID AAI67789 standard; cDNA; 3532 BP.  
XX  
AC AAI67789;  
XX  
DT 27-FEB-2002 (first entry)  
XX



QY 1375 ATCAGGTGGCTTTGGCTGGTGGGCTATCCCTCAGCAGGGGCTATTGGAGGTGCAGGTGG 1434  
Db 1297 ATCAGGTGGCTTTGGCTGGTGGGCTATCCCTCAGCAGGGGCTATTGGAGGTGCAGGTGG 1356  
QY 1435 AGGTGAACGGGGTCCCAACGCTGGGGAGCGTGTGCAGTCAAAAATCGGGGCTCACCGAAG 1494  
Db 1357 AGGTGAACGGGGTCCCAACGCTGGGGAGCGTGTGCAGTCAAAAATCGGGGCTCACCGAAG 1416  
QY 1495 CCATGGTGGCTGCCGACAGCTCGGCTGGGTTTGGCCATPCATGCTCAAGAGAAACCT 1554  
Db 1417 CCATGGTGGCTGCCGACAGCTCGGCTGGGTTTGGCCATPCATGCTCAAGAGAAACCT 1476  
QY 1555 GGTCTCTGGTGGGAGCGCAAGGCGCCAGAGGCTGTGATGAGTGGGGTCCGCTGCTCAG 1614  
Db 1477 GGTCTCTGGTGGGAGCGCAAGGCGCCAGAGGCTGTGATGAGTGGGGTCCGCTGCTCAG 1536  
QY 1615 GCACAGAGCTGGGCTCGACAGCTGCACAGGCACGGGCGGCTGCATGCTCCACCGGTG 1674  
Db 1537 GCACAGAGCTGGGCTCGACAGCTGCACAGGCACGGGCGGCTGCATGCTCCACCGGTG 1596  
QY 1675 GCGGGGCTTCTGGGTGGAGTCTCTCGCATGCAAGTGCACAGACCTGGTGATGAACG 1734  
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QY 2035 CCAGCTTCTGTGTGGAGACACAAATGCCCCACAGGACTGCAGCGCGCTACGCAATGTG 2094  
Db 1957 CCAGCTTCTGTGTGGAGACACAAATGCCCCACAGGACTGCAGCGCGCTACGCAATGTG 2016  
QY 2095 CCAACTTTGGAGAACAGGGAGTGAAGTGGCTGGGACACTTACCGGCAATGACATTG 2154  
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QY 2155 ATTGCCAGTGGGTGATCACAGATGGGGGCGCGGGAATATATCTTCCAGGTGATTG 2214  
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QY 2215 TGAACCCCACTATGAAGTGGCAGAGTCAAGATTCTTCCAAACAATATGCTGCAGTGGCGCT 2274  
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QY 2335 CCAATGCAGAACTCTCCTGGAGGAGAAACAGCGTCTCAGGAAACACCTCATCTGAAGCT 2394  
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QY 2395 GTCACTGCACACTCTAGCTGCTGCCGATACACAGATACCTCAGCTTATTGGAGGCAATG 2454  
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Db 2377 CCCTTCACAGAGTCCCAACTCAGAGGAAAAAGGGCCAGTGGCCAAAGGGGCAACCAAGAACCTG 2436  
QY 2515 CTCAGGAAGCCCTTTTGTATGGCAAGATCAACCAATCCAGATGGTATTGCTCCCTCAGGATGG 2574  
Db 2437 CTCAGGAAGCCCTTTTGTATGGCAAGATCAACCAATCCAGATGGTATTGCTCCCTCAGGATGG 2496  
QY 2575 CTCTGGGCTGCGCCCTTAAGAGGCTGTGGCCCTATGGAATATGTCTCCAGGCTTGTCTCAG 2634  
Db 2497 CTCTGGGCTGCGCCCTTAAGAGGCTGTGGCCCTATGGAATATGTCTCCAGGCTTGTCTCAG 2556  
QY 2635 CTGAGCTCCTCTTCTGTAAAGAAACCCAGTCACTCCCTGAATCTTGGCCACAGAGATCCGGG 2694  
Db 2557 CTGAGCTCCTCTTCTGTAAAGAAACCCAGTCACTCCCTGAATCTTGGCCACAGAGATCCGGG 2616  
QY 2695 ATTCAGGAGCTCTCAGTTTCTTAGGGATGGACTATGGCCCGAGTCCCCCATCTTAAGTGGTG 2754  
Db 2617 ATTCAGGAGCTCTCAGTTTCTTAGGGATGGACTATGGCCCGAGTCCCCCATCTTAAGTGGTG 2676  
QY 2755 CTTCGCAAAATGTCTTGGAGGATATAGGACAGAGGACCAAAATACACAGAGGTAGTGT 2814  
Db 2677 CTTCGCAAAATGTCTTGGAGGATATAGGACAGAGGACCAAAATACACAGAGGTAGTGT 2736  
QY 2815 AGCTCTCTGCTAGGAGCTCAAGCAACACAACTGTATCAAAATCACAACCTGGCAGAGAA 2874  
Db 2737 AGCTCTCTGCTAGGAGCTCAAGCAACACAACTGTATCAAAATCACAACCTGGCAGAGAA 2796  
QY 2875 GCTGTGATCCAACTCTTCTTCTCATCTGTGTATTATTTAGAACTCACCTCTCACACTCTG 2934  
Db 2797 GCTGTGATCCAACTCTTCTTCTCATCTGTGTATTATTTAGAACTCACCTCTCACACTCTG 2856  
QY 2935 TTCTTTAGTGTCTTACCTTTATCTTACCACACATGGGTGTTCCTATTAATCTTTGAA 2994  
Db 2857 TTCTTTAGTGTCTTACCTTTATCTTACCACACATGGGTGTTCCTATTAATCTTTGAA 2916  
QY 2995 GCACAGACTCGGGCATCCCTTATTGGCTGATGGGCAACACCAAGTACGAGTGC 3054  
Db 2917 GCACAGACTCGGGCATCCCTTATTGGCTGATGGGCAACACCAAGTACGAGTGC 2976  
QY 3055 TTGAGAAGGGGCAAGTTTACAGAAATGGCCAGATAGGGCTTCTTACAGAGCAGCAAGA 3114  
Db 2977 TTGAGAAGGGGCAAGTTTACAGAAATGGCCAGATAGGGCTTCTTACAGAGCAGCAAGA 3036  
QY 3115 GTAGGCCAAGCAGAAAGACTGCTGAGGTAAACCGAACCCCGCTCTGAGGGCTCTG 3174  
Db 3037 GTAGGCCAAGCAGAAAGACTGCTGAGGTAAACCGAACCCCGCTCTGAGGGCTCTG 3096  
QY 3175 CCAAGGAAATATATGGACCATTTTACCTGGCAGGCAAGTCTCTCTCAGGATCAACA 3234  
Db 3097 CCAAGGAAATATATGGACCATTTTACCTGGCAGGCAAGTCTCTCTCAGGATCAACA 3156  
QY 3235 CGCATCTCAGGATTTGCTTAAACTTTCAAGTCTCAACCAAGTCTCTGAAGTGAACCTTGCA 3294  
Db 3157 CGCATCTCAGGATTTGCTTAAACTTTCAAGTCTCAACCAAGTCTCTGAAGTGAACCTTGCA 3216  
QY 3295 TTGAATAAATTTTCCCATGGAAAGAACATCAACAAGCCACTCATCTACAGAGATAA 3354  
Db 3217 TTGAATAAATTTTCCCATGGAAAGAACATCAACAAGCCACTCATCTACAGAGATAA 3276  
QY 3355 GAAACCAAGTTTGGCAGAGCAGAGACCGTGGAGAAATCAGAGGGGAAACAG 3414  
Db 3277 GAAACCAAGTTTGGCAGAGCAGAGACCGTGGAGAAATCAGAGGGGAAACAG 3336  
QY 3415 TCAGTTTATGATTAAGGATGGAACCTGGGAAAGGCCACCATTCCTGCTGATGGGCTCTGA 3474  
Db 3337 TCAGTTTATGATTAAGGATGGAACCTGGGAAAGGCCACCATTCCTGCTGATGGGCTCTGA 3396  
QY 3475 TTTGTCTCTTGTCTCAAGTGGAAATAAACCCTATGGTCTTCTTACATGATCTTGTATCTTT 3534  
Db 3397 TTTGTCTCTTGTCTCAAGTGGAAATAAACCCTATGGTCTTCTTGTACATGATCTTGTATCTTT 3456  
QY 3535 TCTCCACTGACACACTTAAGTATGATCTTACAGGACTGACACCTTAATGCAATAA 3594







Human; drug metabolizing enzyme; cell proliferative disorder; metabolic; autoimmune; inflammatory; developmental; gastrointestinal; hypergonadal; pancreatic; endocrine; eye, dermatitis; Addison's disease; antilipemic; acquired immunodeficiency syndrome; AIDS; glomerulonephritis; anorectic; diabetes; atherosclerosis; adult respiratory distress syndrome; anaemia; Grave's disease; thyroiditis; Crohn's disease; infection; anticoagulant; systemic lupus erythematosus; cirrhosis; psoriasis; epilepsy; gastritis; cataract; hypopituitarism; cancer; rheumatoid arthritis; conjunctivitis; cystic fibrosis; peptic ulcer; Wilson's disease; hepatitis; antithyroid; allergy; diarrhoea; thrombosis; obesity; immunosuppressant; tranquilizer; infertility; vulvarey; anticonvulsant; gynaecological; laxative; goitre; nontropic; jaundice; trauma; asthma; DME-1; enzyme; gene; ss.

Homo sapiens.

Key Location/Qualifiers

CDS 1..2271

/\*tag= a

/product= "Human DME-1"

sig\_peptide 1..72

/\*tag= b

mat\_peptide 73..2268

/\*tag= c

/product= "Mature human DME-1 protein"

WO200212467-A2.

14-FEB-2002.

03-AUG-2001; 2001WO-US24382.

04-AUG-2000; 2000US-223055P.

11-AUG-2000; 2000US-224728P.

18-AUG-2000; 2000US-226440P.

24-AUG-2000; 2000US-228067P.

31-AUG-2000; 2000US-230063P.

13-SEP-2000; 2000US-232244P.

20-SEP-2000; 2000US-234269P.

(INCY-) INCYTE GENOMICS INC.

Baughn MR, Bruns CM, Das D, Deleage AM, Ding L, Elliot VS;

Gandhi AR, Griffin JA, Hafalia AJA, Khan FA, Lal P, Lee S;

Lu DAM, Lu Y, Patterson C, Ramkumar J, Ring HZ, Sanjanwala MS;

Tang YT, Thangavelu K, Thornton M, Tribouley CM, Wallia NK;

Warren BA, Yang J, Yao MG, Yue H;

WPI; 2002-206331/26.

P-PSDB; AA221043.

New human drug metabolizing enzyme polypeptide and polynucleotide useful for diagnosing, treating and preventing cell proliferative, autoimmune/inflammatory, endocrine, eye, metabolic and gastrointestinal disorders

Claim 64; Page 166; 179pp; English.

The invention relates to an isolated human drug metabolizing enzyme (DME) polypeptide or a biologically active or immunogenic fragment of DME. DME is useful for diagnosis, treatment and prevention of cell proliferative, autoimmune/inflammatory, developmental, endocrine, eye, metabolic and gastrointestinal disorders including liver disorders. Autoimmune/inflammatory disorders include acquired immunodeficiency syndrome (AIDS), adult respiratory distress syndrome, Addison's disease, atherosclerosis, allergies, anaemia, asthma, autoimmune haemolytic anaemia, autoimmune thyroiditis, Crohn's disease, atopic dermatitis, diabetes mellitus, glomerulonephritis, rheumatoid arthritis, systemic lupus erythematosus, ulcerative colitis, uveitis, viral, bacterial, protozoal, parasitic, fungal, helminthic infections and trauma. Cell proliferative disorders include cancer, arteriosclerosis, cirrhosis and psoriasis; developmental disorders include epilepsy and cataract; and endocrine disorders include disorders of hypothalamus/pituitary, disorders associated with hypopituitarism, including diabetes insipidus, hypogonadism, disorders

associated with hypothyroidism including goitre, Grave's disease, pancreatic disorders such as diabetes mellitus, disorders associated with adrenals, disorders associated with gonadal steroid hormones such as endometriosis, infertility, hypergonadal disorders and gynaecomastia. Disorders of the eye include conjunctivitis and macular degeneration and metabolic disorders include diabetes, cystic fibrosis, obesity and hypocalcaemia. Gastrointestinal disorders include gastritis, peptic ulcer, hepatitis, constipation, diarrhoea, jaundice, Wilson's disease, thrombosis and hepatic tumours. DME gene is useful in gene therapy. The present sequence is human DME-1 cDNA.

XX Sequence 2603 BP; 532 A; 753 C; 827 G; 491 T; 0 other;

SQ Query Match 71.8%; Score 2597.2; 1B 24; Length 2603;

Best Local Similarity 99.9%; Pred. No. 0;

Matches 2599; Conservative 0; Mismatches 3; Indels 0; Gaps 0;

QY 120 ATGGGTGTCCTCCACAGCCACCTCTTTCTGTTCTCTGTTAGGCCAGCCCTT 179

DB 1 ATGGGTGTCCTCCACAGCCACCTCTTTCTGTTCTCTGTTAGGCCAGCCCTT 60

QY 180 CCCAGCAGGCCACAGTCTGCGGACCACTAAGCTCCGGTGGTGGGCCAGAGCAAG 239

DB 61 CCCAGCAGGCCACAGTCTGCGGACCACTAAGCTCCGGTGGTGGGCCAGAGCAAG 120

QY 240 CCAGAGAGGGCGGCTGAGGTGCTGCACAGGGGCCAGTGGGGCACCGTGTGTATAC 299

DB 121 CCAGAGAGGGCGGCTGAGGTGCTGCACAGGGGCCAGTGGGGCACCGTGTGTATAC 180

QY 300 AACTTTGCTATCCAGAGGCCACAGTGGCTTCCCGCCAGTTGGGCTTCGAGCTGCTTG 359

DB 181 AACTTTGCTATCCAGAGGCCACAGTGGCTTCCCGCCAGTTGGGCTTCGAGCTGCTTG 240

QY 360 ACCTGGGCCACACAGTCCCAAGTACGCCCAAGGGGAGGGAACCATCTGGCTGCAATGTG 419

DB 241 ACCTGGGCCACACAGTCCCAAGTACGCCCAAGGGGAGGGAACCATCTGGCTGCAATGTG 300

QY 420 CGTGTGTGGGACACAGAGAGCTCTTTGGACAGTGGGCTCTTAATGCTGGGATCAGT 479

DB 301 CGTGTGTGGGACACAGAGAGCTCTTTGGACAGTGGGCTCTTAATGCTGGGATCAGT 360

QY 480 GACTGCAGTCACTCAGAAGACCTAGGGGTGATATGCCACCCCCGGGCGCATGTGGCTAC 539

DB 361 GACTGCAGTCACTCAGAAGACCTAGGGGTGATATGCCACCCCCGGGCGCATGTGGCTAC 420

QY 540 CTTTCTGAAGTCTCTCCATGCTTGGGCCCCCAGGGCCGGCGGCTGGAGAGGTGGCG 599

DB 421 CTTTCTGAAGTCTCTCCATGCTTGGGCCCCCAGGGCCGGCGGCTGGAGAGGTGGCG 480

QY 600 CTCAGGCCCATCTCTTGGCAGTGCACAGCAGCATAGCCCTGTACCAGCGAGTGGTGGAG 659

DB 481 CTCAGGCCCATCTCTTGGCAGTGCACAGCAGCATAGCCCTGTACCAGCGAGTGGTGGAG 540

QY 660 GTGAAGTATAGGGGCCACTGGCGCAGTGTGTGACCAAGCTGACCATGAACAAACAC 719

DB 541 GTGAAGTATAGGGGCCACTGGCGCAGTGTGTGACCAAGCTGACCATGAACAAACAC 600

QY 720 AGGTGTGTGTCGGGATGCTGGGCTTCCCGAGCGAGTCTCTGTGACAGCCATCTACTAC 779

DB 601 AGGTGTGTGTCGGGATGCTGGGCTTCCCGAGCGAGTCTCTGTGACAGCCATCTACTAC 660

QY 780 AGGAAGTCTGGGATCTGAAGATGAGGAGCCCTAAGTCTAGGCTGAAGAGCTTGACGAAT 839

DB 661 AGGAAGTCTGGGATCTGAAGATGAGGAGCCCTAAGTCTAGGCTGAAGAGCTTGACGAAT 720

QY 840 AAGAAGTCTCTTGTGATCCACAGGTCACTGCTGGGACAGAGCCCATGAGCCCAAC 899

DB 721 AAGAAGTCTCTTGTGATCCACAGGTCACTGCTGGGACAGAGCCCATGAGCCCAAC 780

QY 900 TCCAGAGTGCAGGTGGCTCCAGCCGGGGCAAGCTGGTCCAGCTCCCGAGGTGGCATG 959

DB 781 TCCAGAGTGCAGGTGGCTCCAGCCGGGGCAAGCTGGTCCAGCTCCCGAGGTGGCATG 840





/note= "the CDS lacks a stop codon"

WO200192495-A2.

06-DEC-2001.

29-MAY-2001; 2001WO-US17405.

26-MAY-2000; 2000US-207650P.

(MILL-) MILLENNIUM PHARM INC.

Meyers R;

WPI: 2002-122067/16.

P-PSUB; AAM48743.

Novel human lysyl oxidase polypeptide, designated 47765, and polynucleotides, useful in the diagnosis and treatment of cell proliferation disorders, muscular disorders, bone disorders and skin elasticity disorders

Claim 1: Fig 1; 115pp; English.

The invention relates to human lysyl oxidase (LSO) polypeptide, designated 47765 with cytosolic, haemostatic, hepatotropic, cardiant, osteopathic, dermatological, antiarteriosclerotic, vasotropic, antiinflammatory, hypotensive and antiarrhythmic activity. 47765 molecules are useful for identifying a compound which modulates the activity of the protein, for developing novel diagnostic and therapeutic agents for LSO-mediated or related disorders including cell proliferation, growth or differentiation disorder (e.g. carcinoma, leukaemia, tumour angiogenesis), hepatic disorders and haematopoietic, myeloproliferative disorders), muscular disorders (e.g. cardiac muscle disorder, paralysis, ataxia, myotonia and myokymia), bone disorders (e.g. cutis osteochondrosis and osteoporosis), skin elasticity disorders (e.g. laxe, Ehlers-Danlos type V syndrome), cardiovascular disorders (e.g. arteriosclerosis, ischaemia reperfusion injury, restenosis, arterial inflammation, vascular wall remodeling, tachycardia, vascular heart disease, long QT syndrome, congestive heart failure, hypertension, coronary artery disease and arrhythmia) or cartilage based disorders (e.g. chondromalacia and polycondritis). The encoding polynucleotide is useful in chromosome mapping, tissue typing, forensic identification, as markers for pharmacogenomic profiling of a subject and in gene therapy.

Sequence 2268 BP; 453 A; 656 C; 745 G; 414 T; 0 other;

Query Match 62.6%; Score 2263.2; DB 24; Length 2268; Best Local Similarity 99.9%; Pred No. 0; Matches 2265; Conservative 0; Mismatches 3; Indels 0; Gaps 0;

FT	301	CGCTGTGTGGSCACAGAGAGCTCTTGGACCACTGCGGGT	TAATGCTGGGAGTCACT	360
PN	480	GACTGCACTCACTCAGAAGAGCTAGGGGTGATATGCCACC	CCGGGCGCATCTGGGCTAC	539
XX	361	GACTGCACTCACTCAGAAGAGCTAGGGGTGATATGCCACC	CCGGGCGCATCTGGGCTAC	420
PD	540	CTTTCTGAACCTGTCTCAATGCTTGGGCCCCCAGAGGCC	GGGGGTGGAGAGGTGGGG	599
XX	421	CTTTCTGAACCTGTCTCAATGCTTGGGCCCCCAGAGGCC	GGGGGTGGAGAGGTGGGG	480
XX	600	CTCAAGCCCATCTCTTGGGCCCCCAGAGGCCATAGCCCA	CTGAGCCAGAGGAGGCTGGAG	659
PR	481	CTCAAGCCCATCTCTTGGGCCCCCAGAGGCCATAGCCCA	CTGAGCCAGAGGAGGCTGGAG	540
XX	660	GTGAAGTATGAGGGCCACTTGGGCCCCCAGAGGCCAT	CTGAGCCAGAGGAGGCTGGAG	719
XX	541	GTGAAGTATGAGGGCCACTTGGGCCCCCAGAGGCCAT	CTGAGCCAGAGGAGGCTGGAG	600
DR	720	AGGTGCTGTGGGGATGCTGGGGCTTCCCCAGAGGAGGT	CTGTCTGAGAGCCATATATAC	779
DR	601	AGGTGCTGTGGGGATGCTGGGGCTTCCCCAGAGGAGGT	CTGTCTGAGAGCCATATATAC	660
XX	780	AGAAAGTCTGGGATCTGAAGATGAGGACCTTAAGTCT	AGGCTGAGAGGCTGACGAAT	849
XX	661	AGAAAGTCTGGGATCTGAAGATGAGGACCTTAAGTCT	AGGCTGAGAGGCTGACGAAT	720
XX	840	AAGAACTCTTGGATCCACAGGTCACCTGCTGGGG	ACAGCCCTGAGGAGGCTGAC	899
XX	721	AAGAACTCTTGGATCCACAGGTCACCTGCTGGGG	ACAGCCCTGAGGAGGCTGAC	780
XX	900	TGCCAGGTGACAGTGGCTCCAGCCCGGGGCAAGCTGG	GGGTCAGGCTGAGGAGGCTG	959
XX	781	TGCCAGGTGACAGTGGCTCCAGCCCGGGGCAAGCTGG	GGGTCAGGCTGAGGAGGCTG	840
XX	960	CATGCTGTGTGAGTGTGTGGGAGGAGGAGGAGGAG	GGGTCAGGCTGAGGAGGAGG	1019
XX	841	CATGCTGTGTGAGTGTGTGGGAGGAGGAGGAGGAG	GGGTCAGGCTGAGGAGGAGG	900
XX	1020	CGAAAGAGTCTTGGGAGGAGGAGGAGGAGGAGGAG	GGGTCAGGCTGAGGAGGAGG	1079
XX	901	CGAAAGAGTCTTGGGAGGAGGAGGAGGAGGAGGAG	GGGTCAGGCTGAGGAGGAGG	960
XX	1080	GAGGAGGAGTGTGGGAGGAGGAGGAGGAGGAGGAG	GGGTCAGGCTGAGGAGGAGG	1149
XX	961	GAGGAGGAGTGTGGGAGGAGGAGGAGGAGGAGGAG	GGGTCAGGCTGAGGAGGAGG	1020
XX	1140	AACCTCATCTCTGCCAGTGTGTGTGTGTGTGTGTGT	GTGTGTGTGTGTGTGTGTGT	1199
XX	1021	AACCTCATCTCTGCCAGTGTGTGTGTGTGTGTGTGT	GTGTGTGTGTGTGTGTGTGT	1080
XX	1200	CTCTTTGGGGCCCGGCTGGGCGCAAGGAGGAGGAG	GAGGAGGAGGAGGAGGAGG	1259
XX	1081	CTCTTTGGGGCCCGGCTGGGCGCAAGGAGGAGGAG	GAGGAGGAGGAGGAGGAGG	1140
XX	1260	AGGGGATATGAGCGGAGGAGGAGGAGGAGGAGGAG	GAGGAGGAGGAGGAGGAGG	1319
XX	1141	AGGGGATATGAGCGGAGGAGGAGGAGGAGGAGGAG	GAGGAGGAGGAGGAGGAGG	1200
XX	1320	CAACATGAGAAATGCTGTGTGTGTGTGTGTGTGTGT	GTGTGTGTGTGTGTGTGTGT	1379
XX	1201	CAACATGAGAAATGCTGTGTGTGTGTGTGTGTGTGT	GTGTGTGTGTGTGTGTGTGT	1260
XX	1380	GTGGGCTGTGGTGTGGGCGTATCTCTGAGGAGGAGG	GAGGAGGAGGAGGAGGAGG	1439
XX	1261	GTGGGCTGTGGTGTGGGCGTATCTCTGAGGAGGAGG	GAGGAGGAGGAGGAGGAGG	1320
XX	1440	AACGGGGTCCAGCTGGGAGGAGGAGGAGGAGGAGG	GAGGAGGAGGAGGAGGAGG	1499
XX	1321	AACGGGGTCCAGCTGGGAGGAGGAGGAGGAGGAGG	GAGGAGGAGGAGGAGGAGG	1380
XX	1500	GTGGGCTGTGGGAGGAGGAGGAGGAGGAGGAGGAG	GAGGAGGAGGAGGAGGAGG	1559
XX	1381	GTGGGCTGTGGGAGGAGGAGGAGGAGGAGGAGGAG	GAGGAGGAGGAGGAGGAGG	1440

QY 1560 TGGTCGGGAGCCCAAGAGCCGAGAGGTGGTGTATGAGTGGGGTGGCTGTCTCAGGCACA 1619  
Db 1441 TGGTCGGGAGCCCAAGAGCCGAGAGGTGGTGTATGAGTGGGGTGGCTGTCTCAGGCACA 1500  
QY 1620 GAGTCGGCCCTGCAGAGTGCAGAGAGCCAGAGGCGGTGCTGCTCCACAGCTGGCGGG 1679  
Db 1501 GAGTCGGCCCTGCAGAGTGCAGAGAGCCAGAGGCGGTGCTGCTCCACAGCTGGCGGG 1560  
QY 1680 CGCTTCCTGCTGGAGTCTCTGCATGGAGAGTGCACAGACCTGGTGTATGAACGCCACAG 1739  
Db 1561 CGCTTCCTGCTGGAGTCTCTGCATGGAGAGTGCACAGACCTGGTGTATGAACGCCACAG 1620  
QY 1740 CTAGTCAGAGAGCGCTTACTTTGGAGAGCCGCGCTGAGCCAGCTGTATTGTGCCAC 1799  
Db 1621 CTAGTCAGAGAGCGCTTACTTTGGAGAGCCGCGCTGAGCCAGCTGTATTGTGCCAC 1680  
QY 1800 GAGGAGAACTGCTCTCCAGTCTCGGATCCAGATCATGAGTGGCCCTACGAGTACCGCCG 1859  
Db 1681 GAGGAGAACTGCTCTCCAGTCTCGGATCCAGATCATGAGTGGCCCTACGAGTACCGCCG 1740  
QY 1860 CTATTGGCTTCTCCACACAGATCTCAATCTGGGCGGAGTCTTCTGTCACAAAGACT 1919  
Db 1741 CTATTGGCTTCTCCACACAGATCTCAATCTGGGCGGAGTCTTCTGTCACAAAGACT 1800  
QY 1920 GAGCGGATAGCTGGTGGTGGACAGAGTGCACAGGATTTACACAGCTATTGAGTCTTC 1979  
Db 1801 GAGCGGATAGCTGGTGGTGGACAGAGTGCACAGGATTTACACAGCTATTGAGTCTTC 1860  
QY 1980 ACCACTAGACCTCTCTCACTCTCAATGGTCCAGTGGCTGAGGGGACAGGCCAGC 2039  
Db 1861 ACCACTAGACCTCTCTCACTCTCAATGGTCCAGTGGCTGAGGGGACAGGCCAGC 1920  
QY 2040 TTCTGTCTGAGGACACAACTGCCACAGGACTGCAGCGGCTTACGATGTGCCAAC 2099  
Db 1921 TTCTGTCTGAGGACACAACTGCCACAGGACTGCAGCGGCTTACGATGTGCCAAC 1980  
QY 2100 TTGGAGAACAGGAGTACTGATGAGTGTGGGACACCTTACCGGATGACATTTGATTC 2159  
Db 1981 TTGGAGAACAGGAGTACTGATGAGTGTGGGACACCTTACCGGATGACATTTGATTC 2040  
QY 2160 CAGTGGGTGATATCACAGATGTGGGCGGCGGAAATATCTTCAGTGTATGTAAC 2219  
Db 2041 CAGTGGGTGATATCACAGATGTGGGCGGCGGAAATATCTTCAGTGTATGTAAC 2100  
QY 2220 CCCACTATGAAGTGGCAGAGTCTGATTTCTCCAAAGATATGCTGCAGTGCCTGCAAG 2279  
Db 2101 CCCACTATGAAGTGGCAGAGTCTGATTTCTCCAAAGATATGCTGCAGTGCCTGCAAG 2160  
QY 2280 TATGATGGGACCGGGTCTGGCTGCACAACTGCCACAGGGAATTCATACCCAGGCAAT 2339  
Db 2161 TATGATGGGACCGGGTCTGGCTGCACAACTGCCACAGGGAATTCATACCCAGGCAAT 2220  
QY 2340 GCAGAACTCTCCCTGGAGGAGGACAGCTGTCTCAGGACAACTCATC 2387  
Db 2221 GCAGAACTCTCCCTGGAGGAGGACAGCTGTCTCAGGACAACTCATC 2268

RESULT 6

AAA96737  
ID AAA96737 standard; DNA; 3767 BP.  
XX  
AC AAA96737;  
XX  
DT 19-FEB-2001 (first entry)  
XX  
DE Polynucleotide isolated from lymph node stromal cells of fsn -/- mice.  
XX  
KW Lymph node stromal cell; fsn -/- mice; inflammatory disorder;  
KW immune system disorder; cancer; viral infection; HIV infection;  
KW blood vessel growth; tumour necrosis factor disorder; arthritis;  
KW inflammatory bowel disease; fibroblast growth factor-mediated disorder;  
KW cardiac failure; ss.

XX Mus sp.  
OS  
XX  
FH Key Location/Qualifiers  
FT CDS 129..2402  
XX /\*tag= a  
XX WO200058463-A1.  
XX  
XX 05-OCT-2000.  
XX  
XX 18-FEB-2000; 2000WO-NZ00015.  
XX  
XX 25-MAR-1999; 99US-0276268.  
PR 26-AUG-1999; 99US-0383586.  
XX  
XX (GENE-) GENESIS RES & DEV CORP LTD.  
XX  
XX Strachan L, Sleeman M, Abernethy N, Onrust R, Kumble KD;  
PI Murison JG;  
XX  
XX WPI: 2000-664924/64.  
DR P-PSDB; AAB19127.  
XX  
XX Polypeptide expressed in mammalian fsn -/- lymph node stromal cells,  
PT useful for modulating growth of blood cells, for treating inflammatory  
PT and tumour necrosis factor-mediated disorders, cancer and viral  
PT disorders -  
XX  
XX Claim 4; Page 61-63; 75pp; English.  
XX  
XX The present sequence represents a polynucleotide sequence which is  
CC isolated from lymph node stromal cells of fsn -/- mice. The  
CC polynucleotides and their polypeptides are useful for treating an  
CC inflammatory disorder, disorder of immune system and cancer selected  
CC from epithelial, lymphoid, myeloid, stromal and neuronal cancers, a  
CC viral disorder, in particular HIV infection and for modulating the  
CC growth of blood vessels. The polypeptides are useful for treating a  
CC tumour necrosis factor (TNF) mediated disorder, such as those selected  
CC from arthritis, inflammatory bowel disease and cardiac failure and a  
CC fibroblast growth factor-mediated disorder. It is also useful in assays  
CC to determine biological activity, to raise antibodies, to isolate  
CC corresponding ligands or receptors, to quantify levels of protein or  
CC cognate corresponding ligand or receptors, as anti-inflammatory agents,  
CC and in compositions for the treatment of skin, connective tissue and  
CC immune system diseases. The polynucleotide is useful as marker for  
CC tissue, as a chromosome marker or tags in the identification of a  
CC genetic disorder.  
XX  
SQ Sequence 3767 BP; 877 A; 1047 C; 1080 G; 763 T; 0 other;

Query Match  
Best Local Similarity 53.1%; Score 1918.8; DB 21; Length 3767;  
Matches 2709; Conservative 0; Mismatches 652; Indels 159; Gaps 24;

QY 110 TGAAGTCACCATGGGTGGTGTCTCCACAGGACACCTCTTTCTGTCTCTG---CTGCTGCT 166  
Db 119 TGAATATCACCATGATGTGCGCCCAACACCCACCTTCTCCCTGTTCTGCTACTCTGCT 178  
QY 167 AGGCCAGCCCTCTCCACAGGACCAAGTCTCTGAGGACCACTAGCTCCGGCTGTGGG 226  
Db 179 AAGCCAAAGCCCTCTCCAGTAGGCCACAGTCTATCAGGACCAAGAGCTCAGGCTTGTGG 238  
QY 227 CCCAGAGGACCAAGCCAGAGGAGGCGCTGTGAGGTGTGTGACAGGCGGCGAC 286  
Db 239 GCCAGGACAGACCAAGAGGAGGCGCTTGTGAGGTGTGTGACAGGCGGCGAC 298  
QY 287 CGTGTGTATGACAACTTTGCTATCCAGGAGGCCACAGTGGCTTCCCGCCAGCTGGGTT 346  
Db 299 GGTGTGTATGATGATTTTCGCTCTCCAGAGAGGTACTGTGGCTTCCGACAGCTGGGTT 358  
QY 347 CGAAGCTGCTTGACTGGGCGCCACAGTGTGCCAAGTACGCCCAAGGGAGGACCCATCTG 406



QY	2566	TCAGGATGGCTCTGGGCGCTGGCCCTTAAGGGCTGTGGGCTATGGAATATGTCTCTCAGGC	2622
Db	2574	TCAGGATGGCTCTGGGCGAGCTC-----	2596
QY	2626	TTTGCTCAGCTGAGCTCTCTCTGTGAAGAAACCAGTCATCCTGAACTCTGGCCACAG	2688
Db	2597	-----AACCTTCTCTCTTCAGGAGACTCGATCTTCTTACACTTGAATGCGAC	2645
QY	2686	AGATCCGGGATTCAGGAGCTCTCAGTTTCTTAGGGATGGACTATGGCCCGAGTCCCCCATC	2745
Db	2646	AGTTCCAGTTTCAGGAGCTCTAAGTTCTCAGGATGAACCTGTGACCAAGGCCCTCC-TC	2704
QY	2746	TAAGTGGTGGTTTGAAATGTCTTGAGAGGATATAGGACAGAGACCAAAATACACAGCA	2805
Db	2705	TAAGTGGTGGTTTGAAATGTCTTGAGAGCAAAAGGACAGACCGGAGAACACAAGC	2764
QY	2806	GGTAGTCTTAG-----CTCTCTGCTAGGAGCTCAAGCAACACAACTTGTATCAAAATCA	2866
Db	2765	TGTGGATGGAGTCGTTTCTCGCTATACGCTCCACGCAAAAGGAC-CATGTCAAAGTCA	2823
QY	2861	CAACTGGCAGAGAGCTGGTGGATCCAAATCCCTTCTTCATCTGTTGTATTTAGAACTCA	2920
Db	2824	CACCTGGCAGAGAGCTGGTGGACACAGTCC--CTCAGCTTACCTCACTTAGAACTCG	2880
QY	2921	CTCTCACACTCTG-----TTCTTTAGTGTCTCTACCTTTTATCTTACACACACATGGGT	2975
Db	2881	CATCTCAGGCTCTGAAGCTCTCTCTTGATCTTTTACCTTTCATTCGGTCACACA---TGGT	2937
QY	2976	GTTCCTATTATCCTTGGAGACAGACCTCGGGCATCCCTTATTTGCTGATGGGCCAAC	3035
Db	2938	GTTCCTCAATATCCCTGAACCTCAGGCT-----CTCTCATTTCTGTAGTGGGTCAAC	2989
QY	3036	ACCAACAGTTTACCGAGTGTCTGAGAAGGGGCAAGTTTTCACAGAAATGGCCAGATAGGGCC	3095
Db	2990	ACCTCGATTATGG-----GGCTGGGAGCAAGTTTTCACAGAAATGAGCAGACAGGCGCT	3043
QY	3096	TTCTTACAGACAGCAGAGTAGTAGGCAAGCAGAAAGACTGCTGAGGTAAACGCGACCCCA	3155
Db	3044	TTCTGCAGAGTAGTCAGA-----AAGCAAGACGAAGGCTGAGGTACATGAATTC--	3094
QY	3156	GCCCTGTCTAGGGCTCTCGCAAGGAAATATATGAGCAATTTACCTGGCAGGAGTCTG	3215
Db	3095	-AGCCTCGGAGGACCTCTGCCAGGCA-----GGTCCCATATCTGGCAGGCGAGGCCA	3145
QY	3216	CTCTCTCAGGATCACCGCATCTCAGGATTGCTTAACTTCAAGTCTCAACCAAGT	3275
Db	3146	GTCTCT---TAGAATCACCCACATCTGAGGTAGCTTAAATTTTTAGATTTTACCAAGC	3202
QY	3276	GTCTGAAGTGAACCTTTTGCAITTTGAATAAATTTTGGCATGGAAAGAACTCAAAACAGCCA	3335
Db	3203	CACITCA-----CCTTAAACTTTTGCAATTTGAGAGAAATTTGGTC-AGCCA	3247
QY	3336	CTCATCTCTACAGAGATAAGAAACAAGTTTGGCAGAGCAAGACAGAGACCGTGGAG	3395
Db	3248	AGCCCTCTCGAGGAACACCAAGACAGGTCCTCAGTAGAGTTAGGAACAGAAACGCGAG--	3304
QY	3396	AAATCAAGAGGGGAAACAGTCACTTAGTTAAGGATGGAACTCGGAAAGGCCACCATTC	3455
Db	3305	-----TTAACAGAAAGTGAAGGAAACCTGGAGAGGCCACCATCC	3346
QY	3456	CTGCTTGATGGGCTCTGATTTTGTCTCTCTCAAGTGGAAATAAAACCCCATGGTCTTCTT	3515
Db	3347	A---GTGAGCGGCTGTCTCTGTCTTGTCTCAGGTGGTATAAGACCTGGAGTCTTCAG	3403
QY	3516	GACATGATCTTGATCTTTTCTCCACTSAGACACACTTTAAGTGATGATCTTTACAGGACT	3575
Db	3404	GGCATG--CTTGACCTTTTCTCCACTGACATACAC---ACAGATGATCCTTCTAGTCT	3458
QY	3576	GACACCTAATGCCAATAAAGTTTGTCTATTATGACTGC	3615
Db	3459	TA-----TAATGCCACAAGGTTGTCTACTATGGGCTCC	3493

RESULT 7	
AAC90030	
ID	AAC90030 standard; cDNA; 1782 BP.
XX	
AC	AAC90030;
XX	
XX	09-MAR-2001 (first entry)
DT	
XX	Clone HOHEC84 coding sequence #2.
XX	
XX	Gene therapy; human; bone morphogenic protein; cancer;
KW	chromosome identification; neural disorder; immune; muscular;
KW	reproductive; gastrointestinal; pulmonary; cardiovascular; renal;
KW	proliferative; wound healing; infectious disease; thrombosis; arthritis;
KW	infertility; ss.
XX	
OS	Homo sapiens.
XX	
XX	W0200061774-A2.
PN	
XX	19-OCT-2000.
PD	
XX	06-APR-2000; 2000WO-US09028.
PF	
XX	09-APR-1999; 99US-0128701.
PR	23-APR-1999; 99US-0130693.
PR	29-APR-1999; 99US-0131672.
PR	11-JUN-1999; 99US-0138632.
PR	03-AUG-1999; 99US-0147020.
PR	09-SEP-1999; 99US-0152933.
PR	
XX	(HUMA-) HUMAN GENOME SCI INC.
PA	
XX	Ruben SM, Ni J, Komatsoulis G, Rosen CA, Shi Y;
PI	
XX	WPI; 2000-656328/63.
DR	P-PSDB; AAB49538.
DR	
XX	Bone morphogenic proteins and nucleic acid sequences encoding them,
PT	useful for detecting, preventing and treating cancers and neurological,
PT	immune system and cardiovascular disorders -
XX	
XX	Claim 1; Pages 274-275; 291pp; English.
PS	
XX	The present invention relates to isolated coding sequences and proteins
CC	for human bone morphogenic proteins (BMPs) (see AAC90025-C90030 and
CC	AAB49533-B49538). The present sequence is one such coding sequence. This
CC	sequence may be used for detection of various disorders such as cancer,
CC	for chromosome identification, as chromosome markers and for numerous
CC	other diagnostic or research purposes. In addition, this sequence may be
CC	used to treat disorders such as neural, immune, muscular, reproductive,
CC	gastrointestinal, pulmonary, cardiovascular, renal and proliferative,
CC	disorders (numerous examples of each type of disorder are given in the
CC	specification), wounds, infectious diseases, thrombosis, arthritis, and
CC	infertility.
CC	
XX	
SQ	Sequence 1782 BP; 326 A; 524 C; 616 G; 316 T; 0 other;
	Query Match. 47.5%; Score 1718.2; DB 21; Length 1782;
	Best Local Similarity 98.6%; Pred. No. 0;
	Matches 1754; Conservative 0; Mismatches 23; Indels 2; Gaps
Qy	60 CAAGCCGCTCTTTCCTAGCTGGACAGGTAATTTGGCCTCAGCTGCTTGAAGTCACC 119
	3 CAGCCCGGACTGTCGCGGTCCACTGCGTATCTTGCCCTCAGCTGCTTGAAGTCACC 62
Db	120 ATGCGGTGGTCCCCACAGGCACCCCTCTTTCTGTTCTGCTGCTAGGCCAGCCCCCT 179
Qy	63 ATGCGGTGGTCCCCACAGGCACCCCTCTTTCTGTTCTGCTGCTAGGCCAGCCCCCT 122
Db	180 CCCAGAGGCCACAGTCACTGGGGACCACTAAGCTCCGGTGTGGGCCCCAGAGAGCAAG 239
Qy	123 CCCAGAGGCCACAGTCACTGGGGACCACTAAGCTCCGGTGTGGGCCCCAGAGAGCAAG 182

RESULT 7	
AAC90030	
ID	AAC90030 standard; cDNA; 1782 BP.
XX	
AC	AAC90030;
XX	
XX	09-MAR-2001 (first entry)
DT	
XX	Clone HOHEC84 coding sequence #2.
XX	
XX	Gene therapy; human; bone morphogenic protein; cancer;
KW	chromosome identification; neural disorder; immune; muscular;
KW	reproductive; gastrointestinal; pulmonary; cardiovascular; renal;
KW	proliferative; wound healing; infectious disease; thrombosis; arthritis;
KW	infertility; ss.
XX	
OS	Homo sapiens.
XX	
XX	W0200061774-A2.
PN	
XX	19-OCT-2000.
PD	
XX	06-APR-2000; 2000WO-US09028.
PF	
XX	09-APR-1999; 99US-0128701.
PR	23-APR-1999; 99US-0130693.
PR	29-APR-1999; 99US-0131672.
PR	11-JUN-1999; 99US-0138632.
PR	03-AUG-1999; 99US-0147020.
PR	09-SEP-1999; 99US-0152933.
PR	
XX	(HUMA-) HUMAN GENOME SCI INC.
PA	
XX	Ruben SM, Ni J, Komatsoulis G, Rosen CA, Shi Y;
PI	
XX	WPI; 2000-656328/63.
DR	P-PSDB; AAB49538.
DR	
XX	Bone morphogenic proteins and nucleic acid sequences encoding them,
PT	useful for detecting, preventing and treating cancers and neurological,
PT	immune system and cardiovascular disorders -
XX	
XX	Claim 1; Pages 274-275; 291pp; English.
PS	
XX	The present invention relates to isolated coding sequences and proteins
CC	for human bone morphogenic proteins (BMPs) (see AAC90025-C90030 and
CC	AAB49533-B49538). The present sequence is one such coding sequence. This
CC	sequence may be used for detection of various disorders such as cancer,
CC	for chromosome identification, as chromosome markers and for numerous
CC	other diagnostic or research purposes. In addition, this sequence may be
CC	used to treat disorders such as neural, immune, muscular, reproductive,
CC	gastrointestinal, pulmonary, cardiovascular, renal and proliferative,
CC	disorders (numerous examples of each type of disorder are given in the
CC	specification), wounds, infectious diseases, thrombosis, arthritis, and
CC	infertility.
CC	
XX	Sequence 1782 BP; 326 A; 524 C; 616 G; 316 T; 0 other;
SQ	
Query Match. 47.5%; Score 1718.2; DB 21; Length 1782;	
Best Local Similarity 98.6%; Pred. No. 0;	
Matches 1754; Conservative 0; Mismatches 23; Indels 2; Gaps	
Qy 60 CAAGCCGCCCTCTTCCCTAGCTGGACAGGTAATCTTGSCCTCAGCTGCTTGAAGTCACC 119	
Db 3 CAGCCCGGAGCTGCCCGGCTCCACTCTGGTATCTTGSCCTCAGCTGCTTGAAGTCACC 62	
Qy 120 ATGCGGTGGTCCCCACAGCACCCCTCTTTCTGTTCTGCTGCTAGGCCAGCCCCCT 179	
Db 63 ATGCGGTGGTCCCCACAGCACCCCTCTTTCTGTTCTGCTGCTAGGCCAGCCCCCT 122	
Qy 180 CCCAGCAGGCCACAGTCACTGCGGCACCACTAAGCTCCGGTGTGGGCCCCAGAGACAAG 239	
Db 123 CCCAGCAGGCCACAGTCACTGCGGCACCACTAAGCTCCGGTGTGGGCCCCAGAGACAAG 182	

QY 240 CCAGAGAGGGCCGCTGGAGTGTCTGACACAGGSCAGTGGGGCACCGTGTGTGATGAC 299  
 Db 183 CCAGAGAGGGCCGCTGGAGTGTCTGACACAGGSCAGTGGGGCACCGTGTGTGATGAC 242  
 QY 300 AACTTTGCTATCCAGAGAGCCACAGTGGCTTTGGCCAGCTGGGCTTCGAAAGCTGGCTTG 359  
 Db 243 AACTTTGCTATCCAGAGAGCCACAGTGGCTTTGGCCAGCTGGGCTTCGAAAGCTGGCTTG 302  
 QY 360 AACTTTGCTATCCAGAGAGCCACAGTGGCTTTGGCCAGCTGGGCTTCGAAAGCTGGCTTG 419  
 Db 303 AACTTTGCTATCCAGAGAGCCACAGTGGCTTTGGCCAGCTGGGCTTCGAAAGCTGGCTTG 362  
 QY 420 CGCTGTGTGGGACACAGAGAGCTTCCTTGGACCAAGTGGGCTTCGAAAGCTGGCTTG 479  
 Db 363 CGCTGTGTGGGACACAGAGAGCTTCCTTGGACCAAGTGGGCTTCGAAAGCTGGCTTG 422  
 QY 480 GACTGAGTCACTCAGAGAGCTTCCTTGGACCAAGTGGGCTTCGAAAGCTGGCTTG 539  
 Db 423 GACTGAGTCACTCAGAGAGCTTCCTTGGACCAAGTGGGCTTCGAAAGCTGGCTTG 482  
 QY 540 CTTTCTGAAACTGTCTCCAAATGCTTTGGGCCCCAGGGGCGGCGCTGGAGAGGTGCGG 599  
 Db 483 CTTTCTGAAACTGTCTCCAAATGCTTTGGGCCCCAGGGGCGGCGCTGGAGAGGTGCGG 540  
 QY 600 CTCAGAGCCCATCTTGGACCAAGTGGGCTTCGAAAGCTGGCTTG 659  
 Db 541 CTCAGAGCCCATCTTGGACCAAGTGGGCTTCGAAAGCTGGCTTG 600  
 QY 660 GTGAAGTATGAGGCGCACTGGGCGGCTTCGAAAGCTGGCTTG 719  
 Db 601 GTGAAGTATGAGGCGCACTGGGCGGCTTCGAAAGCTGGCTTG 660  
 QY 720 AGGCTGTGTGGGAGTCTTGGGCTTCGAAAGCTGGCTTG 779  
 Db 661 AGGCTGTGTGGGAGTCTTGGGCTTCGAAAGCTGGCTTG 720  
 QY 780 AGCAAGTCTGGGATCTGAAGTCAAGGAGCCCTAAGTCTAGGCTGAAGAGCTTCGAAAG 839  
 Db 721 AGCAAGTCTGGGATCTGAAGTCAAGGAGCCCTAAGTCTAGGCTGAAGAGCTTCGAAAG 780  
 QY 840 AAGAACTCTTCTGATCCACAGTCACTGGGCTTCGAAAGCTGGCTTG 899  
 Db 781 AAGAACTCTTCTGATCCACAGTCACTGGGCTTCGAAAGCTGGCTTG 840  
 QY 900 TCCAGAGTGGGCTTCGAAAGCTGGGCTTCGAAAGCTGGCTTG 959  
 Db 841 TCCAGAGTGGGCTTCGAAAGCTGGGCTTCGAAAGCTGGCTTG 900  
 QY 960 CATGTGTGTGGTCACTGTGTGGGCTTCGAAAGCTGGCTTG 1019  
 Db 901 CATGTGTGTGGTCACTGTGTGGGCTTCGAAAGCTGGCTTG 960  
 QY 1020 CGCAAGGCTCTGGGACAGAGAGCGAGGTGGGCTTCGAAAGCTGGCTTG 1079  
 Db 961 CGCAAGGCTCTGGGACAGAGAGCGAGGTGGGCTTCGAAAGCTGGCTTG 1020  
 QY 1080 GAGGCGCGGCTGGAGTGTCTATGAACCGCCAGTGGGCTTCGAAAGCTGGCTTG 1139  
 Db 1021 GAGGCGCGGCTGGAGTGTCTATGAACCGCCAGTGGGCTTCGAAAGCTGGCTTG 1080  
 QY 1140 AACTTCACTCTGAGT 1199  
 Db 1081 AACTTCACTCTGAGT 1140  
 QY 1200 CTCTTTGGGCGCGGCTGGGAGCAAGGGCTAGGGCCATCCACTGAGTGTGTGTGTGTGTGTGT 1259  
 Db 1141 CTCTTTGGGCGCGGCTGGGAGCAAGGGCTAGGGCCATCCACTGAGTGTGTGTGTGTGTGTGT 1200  
 QY 1260 AGGGGATATGAGGAGCCCTTCAGGAGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGT 1319  
 Db 1201 AGGGGATATGAGGAGCCCTTCAGGAGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGT 1260

QY 1320 CAACATGAGATGCTGCTGT 1379  
 Db 1261 CAACATGAGATGATGCTGT 1320  
 QY 1380 GTGGGCTTTGGCTGT 1439  
 Db 1321 GTGGGCTTTGGCTGT 1380  
 QY 1440 AACGGGCTTCCACGCTGGGAGGCTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGT 1499  
 Db 1381 AACGGGCTTCCACGCTGGGAGGCTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGT 1440  
 QY 1500 GTGGGCTTCCGACAGCTGGGCTTTGGGCTTTGGGCTTTGGGCTTTGGGCTTTGGGCTTTG 1559  
 Db 1441 GTGGGCTTCCGACAGCTGGGCTTTGGGCTTTGGGCTTTGGGCTTTGGGCTTTGGGCTTTG 1500  
 QY 1560 TGGTGGGAGCGCCAGGAGGCTGT 1619  
 Db 1501 TGGTGGGAGCGCCAGGAGGCTGT 1560  
 QY 1620 GAGCTGGGCTTCCGACAGT 1679  
 Db 1561 GAGCTGGGCTTCCGACAGT 1620  
 QY 1680 CGCTTCTGGCTGT 1739  
 Db 1621 CGCTTCTGGCTGT 1680  
 QY 1740 CTAGTGCAGAGACGGGCTTCTTGGAGGAGCGGCTGTGTGTGTGTGTGTGTGTGTGTGTGTGT 1799  
 Db 1681 CTAGTGCAGAGACGGGCTTCTTGGAGGAGCGGCTGTGTGTGTGTGTGTGTGTGTGTGTGTGT 1740  
 QY 1800 GAGGAGAACTGCTTCTTGGAGGAGCGGCTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGT 1859  
 Db 1741 GAGGAGAACTGCTTCTTGGAGGAGCGGCTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGT 1800

RESULT 8  
 AAC93436 standard; cDNA; 1782 BP.  
 ID AAC93436  
 XX AAC93436;  
 AC AAC93436;  
 DT 16-FEB-2001 (first entry)  
 XX Human secreted protein gene 15 SEQ ID NO:25.  
 DE Human; secreted protein; immunosuppressive; antiarthritic; antirheumatic;  
 KW antiproliferative; cytostatic; cardiac; vasotrophic; cerebroprotective;  
 KW neotropic; neuroprotective; antibacterial; virucide; fungicide;  
 KW ophthalmological; vulvar; autoimmune disease; rheumatoid arthritis;  
 KW hyperproliferative disorders; cancer; cardiovascular disorder;  
 KW cardiac arrest; cerebrovascular disorder; nervous system disorder;  
 KW Alzheimer's disease; ocular disorder; wound healing; skin aging; ss.  
 XX Homo sapiens.  
 OS WO2000061625-A1.  
 XX 19-OCT-2000.  
 PD 06-APR-2000; 2000WO-US08981.  
 XX 09-APR-1999; 99US-0128701.  
 PR 20-JAN-2000; 2000US-0177166.  
 XX (HUMA-) HUMAN GENOME SCI INC.  
 XX (ROSE/) ROSEN C A.  
 PI Rosen CA, Ruben SM, Komatsoulis G;  
 XX WPI; 2000-619226/59.  
 DR P-PSDB; AAB51741.



XX New nucleic acid molecules encoding 48 human secreted proteins for  
 PT diagnosing, preventing, treating or ameliorating medical conditions and  
 PT used as food additives or preservatives -  
 XX  
 PS  
 PS  
 XX Claim 1; Page 420; 500pp; English.  
 CC Polynucleotide sequences AAC93422 - AAC93449 represent cDNA encoding  
 CC human secreted proteins AAB51724 - AAB51777. Sequences AAB51778 -  
 CC AAB51825 represent alternative polypeptides encoded by the genes, and  
 CC amino acid sequences to which they are homologous. The genes and proteins  
 CC have activities dependent on the tissues and cells in which they are  
 CC expressed. Examples of their activities include immunosuppressive;  
 CC antiarthritic; antirheumatic; antiproliferative; cytoprotective; cardiac;  
 CC vasotrophic; cerebroprotective; nootropic; neuroprotective; antibacterial;  
 CC virucide; fungicide; opthalalmologic; and vulnerary. The secreted  
 CC proteins, polynucleotides, antagonists and agonists may be useful in  
 CC treating, preventing and/or diagnosing diseases and disorders such as  
 CC autoimmune diseases e.g. rheumatoid arthritis, hyperproliferative  
 CC disorders e.g. neoplasms of the breast or liver, cardiovascular disorders  
 CC e.g. cardiac arrest, cerebrovascular disorders e.g. cerebral ischaemia,  
 CC angiogenesis, nervous system disorders e.g. Alzheimer's disease,  
 CC infections caused by bacteria, viruses and fungi and ocular disorders  
 CC e.g. corneal infection. The polypeptides can also be used to aid wound  
 CC healing and epithelial cell proliferation, to prevent skin aging due to  
 CC sunburn, to maintain organs before transplantation, for supporting cell  
 CC culture of primary tissues, to regenerate tissues and in chemotaxis. The  
 CC polypeptides can also be used as a food additive or preservative to  
 CC increase or decrease storage capabilities, fat content, lipid, protein,  
 CC carbohydrate, vitamins, minerals, cofactors and other nutritional  
 CC components. Oligonucleotide AAC93413 - AAC93421 and peptide AAB51723 are  
 CC used in the isolation and characterisation of the proteins and  
 CC polynucleotides of the invention.  
 XX  
 SQ Sequence 1782 Bp; 326 A; 524 C; 616 G; 316 T; 0 other;

Query Match 47.5%; Score 1718.2; DB 21; Length 1782;

Best Local Similarity 98.6%; Pred. No. 0;

Matches 1754; Conservative 0; Mismatches 23; Indels 2; Gaps 2;

QY 60 CAAGCCCGCTCTTCTAGAGTGGACAGATCTTGGCCCTCAGCTGCTTGAAGTCACC 119  
 DB 3 CAGCCCGGACTGTCGCGCTCCATCTGGATCTTGGCCCTCAGCTGCTTGAAGTCACC 62  
 QY 120 ATGGCGTGTGCCACACAGCACCCCTCTTCTCTGCTGTCTGTAGGCCAGCCCTT 179  
 DB 63 ATGGCGTGTGCCACACAGCACCCCTCTTCTCTGCTGTCTGTAGGCCAGCCCTT 122  
 QY 180 CCAGCAGGCCACAGTCTAGTGGGACCCACTAAGCTCGGCTGTGGGCCACAGAGCAAG 239  
 DB 123 CCCAGCAGGCCACAGTCTAGTGGGACCCACTAAGCTCGGCTGTGGGCCACAGAGCAAG 182  
 QY 240 CCAGCAGGCCCGCTGGAGGTGCTGCACAGGCCAGTGGGCCACCGTGTGTATGAC 299  
 DB 183 CCAGAGAGGCCCGCTGGAGGTGCTGCACAGGCCAGTGGGCCACCGTGTGTATGAC 242  
 QY 300 AACTTTGCTATCCAGGAGGCCACAGTGGCTTGGCGCAGCTGGGCTTGAAGCTGCTTG 359  
 DB 243 AACTTTGCTATCCAGGAGGCCACAGTGGCTTGGCGCAGCTGGGCTTGAAGCTGCTTG 302  
 QY 360 ACTTGGGCCACAGTGTCAAGTACGCGCAAGAGGAGGAGGCCATCTGGCTGGACAATGTG 419  
 DB 303 ACTTGGGCCACAGTGTCAAGTACGCGCAAGAGGAGGAGGCCATCTGGCTGGACAATGTG 362  
 QY 420 CGTGTGTGGGCACAGAGTCTCTTGGACAGTGGGCTCTAATGGCTGGGAGTCACT 479  
 DB 363 CGTGTGTGGGCACAGAGTCTCTTGGACAGTGGGCTCTAATGGCTGGGAGTCACT 422  
 QY 480 GACTGTGAGTCACTCAGAGAGCTAGGGGTGATATGCCACCCCGGCCCATCTGTGGCTAC 539  
 DB 423 GACTGTGAGTCACTCAGAGAGCTAGGGGTGATATGCCACCCCGGCCCATCTGTGGCTAC 482  
 QY 540 CTTTCTGAAGTCTCTCCATGCTTTGGGCCCCAGGCCCGGCTGGAGGAGGTGCGG 599

DB 483 CTTTCTGAAGTCTCTCCATGCTTGGGCCCCA-GGCCGGCGCTGGAGAGGT-CGG 540  
 QY 600 CTTCAAGCCCATCTCTTGGCAGTGCCCAAGCAGCATAGCCCAAGTGAACCGAGGAGCGCTGGAG 659  
 DB 541 CTTCAAGCCCATCTCTTGGCAGTGCCCAAGCAGCATAGCCCAAGTGAACCGAGGAGCGCTGGAG 600  
 QY 660 GTGAAGTATAGAGGCCCACTGGCGGACAGTGTGTGACACAGGCTGGACCATGAACAAACAGC 719  
 DB 601 GTGAAGTATAGAGGCCCACTGGCGGACAGTGTGTGACACAGGCTGGACCATGAACAAACAGC 660  
 QY 720 AGGGTGTGTGGGATCCTGGGCTTCCCGAGGAGTGCCTGTGACAGCCACTACTAC 779  
 DB 661 AGGGTGTGTGGGATCCTGGGCTTCCCGAGGAGTGCCTGTGACAGCCACTACTAC 720  
 QY 780 AGGAAGTCTGGGATCTGAAGATGAGGACCCCTAAGTCTAGGCTGAAGAGCTGACGAAT 839  
 DB 721 AGGAAGTCTGGGATCTGAAGATGAGGACCCCTAAGTCTAGGCTGAAGAGCTGACGAAT 780  
 QY 840 AGAAGTCTCTTCTGGATCCACAGGTCACTGCTGGGGACAGAGCCCCACATGGCCAAAC 899  
 DB 781 AAGAAGTCTCTTCTGGATCCACAGGTCACTGCTGGGGACAGAGCCCCACATGGCCAAAC 840  
 QY 900 TGCCAGGTGACAGTGGCTCCAGCCCGGGGACAGTGCAGCCAGCTGCCAGTGGCATG 959  
 DB 841 TGCCAGGTGACAGTGGCTCCAGCCCGGGGACAGTGCAGCCAGTGGCATG 900  
 QY 960 CATGCTGTGTGAGTGTGTGGCAGGCGCTCACTTCCGCCCAACGAAAGACCAAA 1019  
 DB 901 CAGCTGTGTGTGAGTGTGTGGCAGGCGCTCACTTCCGCCCAACGAAAGACCAAA 960  
 QY 1020 CGCAAAGGCTCTTGGGACAGAGAGCCGAGGCTGCGCTGCCGTCGCGGCCACAGTGGGC 1079  
 DB 961 CGCAAAGGCTCTTGGGACAGAGAGCCGAGGCTGCGCTGCCGTCGCGGCCACAGTGGGC 1020  
 QY 1080 GAGGCGCGGCTGGAAGTGTCTATGAACCGCCAGTGGGGACAGTGTGTGACACAGAGTGG 1139  
 DB 1021 GAGGCGCGGCTGGAAGTGTCTATGAACCGCCAGTGGGGACAGTGTGTGACACAGAGTGG 1080  
 QY 1140 AACTCTATCTCTGCCAGTGTGTGTGCTGAGTGGGCTTGGCTGTCTCGGAGGCC 1199  
 DB 1081 AACTCTATCTCTGCCAGTGTGTGTGCTGAGTGGGCTTGGCTGTCTCGGAGGCC 1140  
 QY 1200 CTTTGGGCGCCCGCTGCGGCAAGGCTAGGGCCCATCCACCTGAGTGAAGTGGCTGTC 1259  
 DB 1141 CTTTGGGCGCCCGCTGCGGCAAGGCTAGGGCCCATCCACCTGAGTGAAGTGGCTGTC 1200  
 QY 1260 AGGGATATGACGAGCCCTCAGCGACTGCCCTGCCCTGGAGAGGCTCCAGAAATGGTTGC 1319  
 DB 1201 AGGGATATGACGAGCCCTCAGCGACTGCCCTGCCCTGGAGAGGCTCCAGAAATGGTTGC 1260  
 QY 1320 CAACATGAGATGCTGCTGCTCAGGTGCAATGTCCCTAACATGGGCTTTTCAGAAATCAG 1379  
 DB 1261 CAACATGAGATGCTGCTGCTCAGGTGCAATGTCCCTAACATGGGCTTTTCAGAAATCAG 1320  
 QY 1380 GTGCGCTTTGGCTGGTGGGCTATCCCTGAGGAGGGGCTATTGGAGGTGCAGTGGAGGTG 1439  
 DB 1321 GTGCGCTTTGGCTGGTGGGCTATCCCTGAGAGAGGCTATTGGAGGTGCAGTGGAGGTG 1380  
 QY 1440 AACGGGTGCCACGCTGGGGAGCGTGTGAGTGAAAACTGGGGGCTCACCGAAGCCATG 1499  
 DB 1381 AACGGGTGCCACGCTGGGGAGCGTGTGAGTGAAAACTGGGGGCTCACCGAAGCCATG 1440  
 QY 1500 GTGGCTGCGCAGCAGCTGGGCTGGTTCCTCATGCTCAAGAAACCTGGTTTC 1559  
 DB 1441 GTGGCTGCGCAGCAGCTGGGCTGGTTCCTCATGCTCAAGAAACCTGGTTTC 1500  
 QY 1560 TGGTGGGGGACCGCCAAAGGCCCGAGAGGTGTGTGATGAGTGGGGTGCCTGTCTCAGGCACA 1619  
 DB 1501 TGGTGGGGGACCGCCAAAGGCCCGAGAGGTGTGTGATGAGTGGGGTGCCTGTCTCAGGCACA 1560  
 QY 1620 GAGTGGGCCCTGACAGAGTGTCCAGAGGACAGGCGCGGTGCATGTCTCCACCGTGGCGGG 1679









Db 2090 TCTCTCCAGATCCACAATGGCCAGTCCGACTTCGGCCCAAGAACGGCCGACG 2149  
 Qy 1930 GTTGGGTTTGGACCACTGGACAGCATACACAGGATTGAGGTCTTCCACCACTAGC 1989  
 Db 2150 CTTGGATCTGGACGACTGTACAGGACATACACAGCATGGAGGTCTTCCACCACTATG 2209  
 Qy 1990 ACCTCTCACTCTCAATGGTCCAAAGTGGCTGAGGGGACAAAGGCCAGCTTCTGTCTGG 2049  
 Db 2210 ACTTGTGAACCTCAATGGCAACAGTGGCAGAGGGCCACAAAGGCCAGCTTCTGTCTGG 2269  
 Qy 2050 AGGACAAACTCCCCACAGGACTCAGCGCGCTACGATGTGCAACTTTGGAGAAC 2109  
 Db 2270 AGGACAGAAATGTGAAGAGACATCCAGAGAAATACAGATGTGCAACTTTGGCGATC 2129  
 Qy 2110 AGGAGTGACTGTAGGCTGTGGGACACCTACCGGATGACATGATTCGCACTGGGTGG 2169  
 Db 2330 AGGCAATCACCATTGGGCTGTGGGACATGTACCGCCATGACATCGACTGCGAGTGGTGG 2389  
 Qy 2170 ATATCAGATGTGGGCGCCCGGAATATATCTTCCAGGTGATTGTCAACCCCACTATG 2229  
 Db 2390 ACATCACTGAGTGCCTCCCTGGAGACTACCTGTTCCAGGTGTTGTTATTAACCCCACTTCG 2449  
 Qy 2230 AAGTGGCAGAGTCAATTTCTCCAAATATGTGCTGACTGCCCTGCAAGTATGATGGGC 2289  
 Db 2450 AGGTGAGAAATCCGATTACTCCCAACACATCATGAANTGAGGCGGCTATGACGGCC 2509  
 Qy 2290 ACCGGTCTGGCTGCACAACTTGCACACAGGGAATTCATACCCAGCCAAATGCGAAGCTCT 2349  
 Db 2510 ACCCATCTGGATCTAATCTGACATAGTGGTCTTCTTACCAACACC 2602  
 Qy 2350 CCCTGGAGCAGAACAGGCTGTAGGACACACC 2382  
 Db 2570 AGTTGAGCACTTCCAGCGGGCTCTTAACAAACC

RESULT 12  
 ID ABQ88183 standard; cDNA; 3432 BP.  
 XX  
 AC ABQ88183;  
 XX  
 DT 18-SEP-2002 (first entry)  
 XX  
 DE Human osteoblast differentiation related cDNA SEQ ID NO 90.  
 XX  
 KW Human; osteoblast; stem cell differentiation; bone tissue deposition;  
 KW osteoporosis; osteopathic; ss.  
 XX  
 OS Homo sapiens.  
 XX  
 FN W0200250301-A2.  
 XX  
 PD 27-JUN-2002.  
 XX  
 PF 18-DEC-2001; 2001WO-US48276.  
 XX  
 PR 18-DEC-2000; 2000US-255882P.  
 PR 24-APR-2001; 2001US-285691P.  
 XX  
 XX (GENE-) GENE LOGIC INC.  
 PA (PROC) PROCTER & GAMBLE CO.  
 XX  
 PI Ji D, Axelrod DW, Cook JS, Jaiswal N, Einstein R, Houghton A;  
 PI Mertz L;  
 XX  
 DR WPI; 2002-557663/59.  
 XX  
 PT Use of genes and their expression profiles associated with osteoblast  
 PT differentiation for screening modulators bone formation, for diagnosing  
 PT or treating e.g. osteoporosis, or as markers for the differentiation  
 PT process

PS Claim 1: SEQ ID NO 90; 78pp + Sequence Listing; English.  
 XX  
 CC The invention relates to genes and their expression profiles are used  
 CC for:  
 CC (a) screening modulators of precursor stem cell differentiation into  
 CC osteoblasts, or bone tissue deposition;  
 CC (b) diagnosing abnormal deposition of bone tissue, abnormal rate of  
 CC osteoblast formation or osteoporosis; or  
 CC (c) treating or monitoring treatment of the conditions cited in (b), or  
 CC monitoring the progression of bone tissue deposition.  
 CC Specific conditions include postmenopausal osteoporosis, glucocorticoid  
 CC osteoporosis or male osteoporosis, osteopenia, osteodystrophy,  
 CC drug-induced abnormalities in bone formation or bone loss, conditions  
 CC that involve altered bone metabolism (e.g. idiopathic juvenile  
 CC osteoporosis), skeletal disease linked to breast cancer, mastocytosis,  
 CC Fanconi syndrome or fibrous dysplasia. The present sequence is that of an  
 CC osteoblast differentiation associated cDNA marker of the invention.  
 CC Note: The sequence data for this patent did not form part of the printed  
 CC specification, but was obtained in electronic format directly from Wipo  
 CC at ftp.wipo.int/pub/published\_pct\_sequences.  
 XX  
 SQ Sequence 3432 BP; 775 A; 1007 C; 983 G; 667 T; 0 other;  
 Query Match 23.5%; Score 849; DB 34; Length 3432;  
 Best Local Similarity 63.7%; Pred. No. 2.1e-110;  
 Matches 1397; Conservative 0; Mismatches 745; Indels 51; Gaps 5;  
 QY 199 TGGGACCACTAAGCTCCGGCTGGTGGGCCACAGAGAGCAAGCCAGAGGAGGCGCCCTGG 258  
 DB 405 TGGCCAGATTCAGCTGCGCTGGCTGGGCGAGAGAGGAGCCAGAGGCGCGGTGG 464  
 QY 259 AGGTGTGCACAGGCGCAGTGGGCGCAGCTGTGTGATGCAACTTTGCTATCCAGGAGG 318  
 DB 465 AGGTGTACTATGATGCGCAGTGGGCGCAGCTGTGTGATGCAACTTTGCTATCCAGCTG 524  
 QY 319 CCACAGTGGCTTGGCGCCAGCTGGGCTTCGAAGCTGCCTTGACCTGGGTCACAGTGTCA 378  
 DB 525 CCCACGTGCTTGGCGGAGCTGGGCTATGTGGAGGCCAAGTCTGGACTGCAGCTCT 584  
 QY 379 AGTACGGCCAGGGAGGAGCCCATCTGGCTGCACAATGTGGCTGTGTGKACAGAGA 438  
 DB 585 CTTACCGCAGGAGGAGGAGGCCCATCTGTTAGACAACTTCCACTGTACTGGCAAGAG 444  
 QY 439 GCTCTTTGACCACTGCGGCTTAATGGCTGGGAGTCACTGACTGACGTCACTCAGAG 498  
 DB 645 CGACCTTTGACGATGCACCTCCAAATGGCTGGGCGCTGCTGACTGCAAGCACAGGAG 704  
 QY 499 ACCTAGGGGTGATATGCCACCCCGCGCCATCTGTGGCTACCTTTCTGAAACTG---TCT 555  
 DB 705 ATGTGGTGTGGTGTGACGACAAAGAGATTCTGGGTTCAAATTTGACAAATCTGTTGA 764  
 QY 556 CCAATGCCCTTGGCCCGGCGGCGGCTGGAGAGCTGGGGCTCAAGCCCATCTCTT 615  
 DB 765 TCACACAGATAGAGAACCTGAATATCCAGGTGGAGGACCTTCGGATTTCGAGCATCTCT 824  
 QY 616 CCAGTGCACAGCAGCATAGCCAGTGAACGAGGAGGAGCCCTGGAGGTGAAGTATGAGGCC 675  
 DB 825 CAACCTACCGCAAGCGCACCCAGTGTGGAGGCTGACCTGGAGGTGAAGGAGGCGCAAGA 884  
 QY 676 ACTGGCGGAGCTGTGTGACCGGGCTGGACCATGAACACAGCAGGCTGTGTGGCGGA 745  
 DB 885 CCTGGAAGCAGATCTGTGACAGCACTGGAGGCCAAGATTCTCCGCTGGTCTGCGGCA 944  
 QY 736 TGTCTGGGCTTCCCGAGGAGGTGCTGTGACAGCCACACTACAGGAAAGTCTGGGATC 795  
 DB 945 TGTCTGGCTTCCCTGGGAGGAGGACATACAAATACAAATTCGTAACAAA----- 992  
 QY 796 TGAAGATGAGGAGCCCTAAGTCTAGGCTGAGAGAGCTGACGAATTAAGAACTCTCTTGGGA 856  
 DB 993 -----TGTTCCTCA TGGAGGAAGCAGCGCTACTTGGC 1025  
 QY 856 TCCACAGGTCACTGCTGGGAGCAGGAGCCCACTGACCAACTGCCAGGTG---CAGG 912



Db 1026 CATTTCTCCATGACTGCACCGGCACAGAGGCCACATCTCCAGCTGCAAGCTGGGCCCC 1085  
 QY 913 TGGCTCCAGCCCGGGGCAAGCTGGGCCACAGCTGGCCAGATGGGATGATCATGCTGTGGTCA 972  
 Db 1086 AGGTGTCACTGGACCCCATGAAGAATGTCACTTCCGAGAAATGGGCTGCCGGCGTGGTGA 1145  
 QY 973 GCTGTGTGGCAGGSCCTCACTTCGGCCACCGAAGACAAAGCCACACGCAAGGGTCTCT 1032  
 Db 1146 GTTGTGTGGCTGGGCAAGTCTTACGCCCTGACGACCTCGAGATTCGGGAAGCATACA 1205  
 QY 1033 GGGCAGAGGAGCCGAGGGTGGCGCTCGCGCTCCGGGGCCACAGGTGGGCGAGGGCCGGGTGG 1092  
 Db 1206 AGCCAGAGCAACCCCTGGTGGACTGAGAGGGCTGCTACATCGGGAGGGCCGGGTGG 1265  
 QY 1093 AAGTGCTCATGAACCCGACGATGGGGCAGCGTCTGTGACCAACAGGTGGAACCTCATCTCTG 1152  
 Db 1266 AGGTGCTTCAAAAATGGAGAAATGGGGGACCGCTCTGACAGCAAAAGTGGGACCTGTGTGCG 1325  
 QY 1153 CCAGTGTGCTGTGCTGCTGAGTGGGCTTTGGCTCTGCTCGGAGGCCCTCTTTGGGGCCC 1212  
 Db 1326 CCAGTGTGCTGTGAGAGAGCTGGGCTTTGGGAGTGCAGAGAGGAGTCACTGGGTCCC 1385  
 QY 1213 GGTGTGGCCCAAGGGCTAGGGGCCCATCCACCTGAGTGAAGTGGCTGCGAGGGGATATGAGC 1272  
 Db 1386 GACTGGGGCAAGGATCGGACCCCATCCACCTCAACGAGATCCAGTGCAAGGCAANTAGA 1445  
 QY 1273 GGACCTCAGCAATGCCCTGCCCTGGAAGGGTCCAGAAATGGTTGCCAATGAGAATG 1332  
 Db 1446 AGTCCATTATAGACTGCAAGTTCAATGCCAGTCTCAG---GGCTGCAACCAAGAGGAG 1502  
 QY 1333 CTGCTGTGTGCTGAGTGAATGTCCCTAACATGGCTTTGAGATCAGGTGGCTGTGGCTG 1392  
 Db 1503 ATGCTGTGTGAGATGATGAACACCCCTGCCATGGCTTGCAGAGAAAGAGCTCGGCTGAACG 1562  
 QY 1393 GTGGGCTATCCCTGAGAGGGGCTATTGAGGTGCAAGTGGAGTGAAGCGGCTCCAC 1452  
 Db 1563 GCGGCCCAATCCCTACAGGGCCGAGTGAAGTGTGTTGGAGAGAAACGGTCTCCTTG 1622  
 QY 1453 GCTGGGGAGCGTGTGAGTGAATACTGGGGGCTCACCGAAGCCATGGTGGCCCTGCGGAC 1512  
 Db 1623 TGTGGGGATGTTGTGTGGCCAAATCGGGCATCTGGGAGGCCATGGTGTCTGCGGCC 1682  
 QY 1513 AGCTGGCCCTGGGTTTGGCATCATGCTTACAGGAAACCTGGTCTGTGTCGGGACCG 1572  
 Db 1683 AGCTGGGCTGGGATTCGCCAGCAACCCCTTCAGGAGAGCTGTGTTGGCAGCGAGATG 1742  
 QY 1573 CAAGGGCCAGAGGTGTGTGATGAGTGGGTGGCTGCTCAGGACACAGAGCTG3CCCTGC 1632  
 Db 1743 TCAACAGCAACAAGTGTGATGAGTGGAGTGAAGTGTCTCGGAAACGAGAGCTGTCCCTGG 1802  
 QY 1633 AGCATGCCAGAGSCACGGGCGG---GTGCACTGCTCCACGGTGGCGGGCGCTTCTCTGG 1689  
 Db 1803 CGCACTGGCGCCACGACGGGGAGACGTGGCTGCCCCCAGGGCGGAGTGCAGTACGGGG 1862  
 QY 1690 CTGAGTCTCTGATGGAGAGTGCACACACCTGTGATGAACGCCACCTAGTGCAGG 1749  
 Db 1863 CCGAGTGTGCTGTCTAGAAACCCCTGACCTGTCTCAATGCGGAGATGTTGTCAGC 1922  
 QY 1750 AGACGGCTACTTGGAGGACCGCCGCTCAGGACAGTGTATTGTGCCACGAGAGAACT 1809  
 Db 1923 AGACACCTACTGAGAGACCGGCCCAATGTTGATGCTGCAAGTGTGCCATGGAGAGAACT 1982  
 QY 1810 GCCTCTCCAAAGTCTGCGGATCACAATGAGCTGGCCCTACGGATACCGCGGCTATTGCGCT 1869  
 Db 1983 GCCTCTCGGCTAGCGCGCAGACCCGACCCACACCGGGTACCGCGGCTCCTGCGCT 2042  
 QY 1870 TCTCCACAGATCTAATCTGGGCGGAGTCACTTTGTGTCAAAGACTG3ACGGATA 1929  
 Db 2043 TCTCTCCAGATCCACAACAAATG3CCAGTCCGCACTTCCGGCCCAAGACGGCGCCACG 2102  
 QY 1930 GCTGGGTTTGGCAGCTGACAGGAGGATACACAGCATTTGAGTCTTCAACCACTACG 1989  
 Db 2103 CGTGGATCTGGCAGCTGTACAGGCACTACCAAGCATGGAGGCTTTCACCCACTATG 2162

QY 1990 ACTCTCTCACTCTCAATGCTCCAAAGTGGCTGAGGGGCAAGGCCAGCTTCTCTCTGG 2049  
 Db 2163 ACTCTCTCACTCTCAATGCTCCAAAGTGGCTGAGGGGCAAGGCCAGCTTCTCTCTGG 2222  
 QY 2050 AGGACACAAACTGCCACAGGACTGCCAGCGGCTAGCATGTGCCAATTTGGAGAAC 2109  
 Db 2223 AGGACACAGAAATGTGAAGAGACATCCAGAAATTAAGTGTGCCAATTTGGCGGATC 2282  
 QY 2110 AGGGAGTCACTGTAGGCTGCTGGGACACCTACCGGCATGACATTTGCCAGTGGGTG 2169  
 Db 2283 AGGGATCACCATGGCTGCTGGGACATGTACCGCATGACATCGACTGCCAGTGGGTG 2342  
 QY 2170 ATATCACAGATGTGGGCCCCGGGAATTAATCTTCAGGTGATTTGAAACCCCACTATG 2229  
 Db 2343 ACATCACTGACGTGGCCCCCTGGAGACTACCTGTTCAGGTGTTTATTAACCCCACTTGG 2402  
 QY 2230 AAGTGGCAGAGTCAGATTTCTCCAAACAATATGCTGAGTGGCGCTGCAAGTATGATGGSC 2289  
 Db 2403 AGGTTGCAGAAATCCGATTAATCTCCAAACAATCATGAATGCAAGAGCGCTATGACGGCC 2462  
 QY 2290 ACCGGTCTGGCTGCACAACTGCCACAGAGGAATTCATACCCAGCCAATGCAGAACTCT 2349  
 Db 2463 ACCGATCTGGATGTACAACCTGCCACATAGTGGTTCCTTCAGCGAGAGACGGAAGAA 2522  
 QY 2350 CCTGTGAGCAGGAACAGCGTCTCAGGAACAACC 2382  
 Db 2523 AGTTTGAGCACTTCAGCGGGCTCTTAAACAACC 2555

RESULT 13  
 ABA95142  
 ID ABA95142 standard; cDNA; 2325 BP.  
 XX AC ABA95142;  
 XX DT 20-MAY-2002 (first entry)  
 XX DE Human LOR-1 protein encoding cDNA.  
 XX KW Lysyl-oxidase; angiogenesis; cancer; LOR-1; antiarthritic; antidiabetic;  
 KW ophthalmological; antipsoriatic; antiinflammatory; vasotropic; human;  
 KW immunomodulator; dermatological; vulnerary; gene; ss.  
 OS Homo sapiens.  
 XX FH Key Location/Qualifiers  
 FT CDS 1..2325  
 FT /\*tag= a  
 FT /product= "LOR-1 protein"  
 XX WO200211667-A2.  
 XX PD 14-FEB-2002.  
 XX PF 07-AUG-2001; 2001WO-IL00728.  
 XX PR 08-AUG-2000; 2000US-223739P.  
 XX (TEC ) TECHNION RES & DEV FOUND LTD.  
 XX PA Neufeld G, Akiri G, Vadasz Z, Gengrovitch S;  
 PI WPI; 2002-227109/28.  
 DR P-PSDB; ABB07649.  
 XX Composition for modulating angiogenesis in mammalian tissue for  
 PT treating e.g. arthritis, psoriasis, comprises molecule capable of  
 PT modifying level and/or activity of at least one type of lysyl-oxidase  
 PT of the tissue  
 XX Claim 5; Page 49-50; 67pp; English.  
 PS XX

CC The invention provides a pharmaceutical composition useful for modulating  
CC angiogenesis in mammalian tissue. The composition comprises a molecule  
CC capable of modifying a level and/or activity of at least one type of  
CC lysyl-oxidase of the mammalian tissue as an active ingredient and a  
CC carrier. Methods for identifying molecules capable of modulating and for  
CC angiogenesis; for modulating of cancerous tissue are also provided, where  
CC the modulation in activity is useful for treating arthritis, diabetic  
CC retinopathy, psoriasis, vasculitis; and for disease characterized by  
CC fragile blood vessels, including Marfan's syndrome, Kawasaki, Ehlers-  
CC danlos, curis-laxa, and takysu; diseases characterized by changes in the  
CC wall of blood vessels e.g. restenosis which is a common complication  
CC following balloon therapy, fibromuscular dysplasia and aortic stenosis.  
CC The present sequence represents a cDNA encoding a LOR-1 protein,  
CC belonging to the lysyl-oxidase family of enzymes.  
XX  
SQ

Sequence 2325 BP; 522 A; 670 C; 717 G; 416 T; 0 other;  
Query Match 23.4%; Score 847.4; DB 24; Length 2325;  
Best Local Similarity 63.7%; Pred. No. 4.5e-210;  
Matches 1396; Conservative 0; Mismatches 746; Indels 51; Gaps 5;

Qy	199	TGGGCACTAAGCTCCGGCTGTGGGCGCCAGAGAGCAAGCCAGAGAGGCGCGCTGG	258
Db	158	TGGCCAAAGATTACGTCCGCTGGCTGGGAGAGAGAGAGAGAGAGAGAGAGAGAG	217
Qy	259	AGGTGCTGCACAGGCGCAGTGGGGCACCGGTGTGTATGATGATGATGATGATGAT	318
Db	218	AGGTGTACTATGATGGCCAGTGGGGCACCGGTGTGTATGATGATGATGATGATGAT	277
Qy	319	CCACAGTGGCTTGGCGGCTGGAGCTGGAGCTGGAGCTGGAGCTGGAGCTGGAGCT	378
Db	278	CCCAGCTGCTGGCGGAGCTGGAGCTGGAGCTGGAGCTGGAGCTGGAGCTGGAGCT	337
Qy	379	AGTACGGCCAAAGGAGGAGGACCCATGCTGGTGGAGTGGAGTGGAGTGGAGTGGAG	438
Db	338	CCTACGGCAAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAG	397
Qy	439	GCTCCTTGGACAGTGGCGGTGTATGCTGGGAGTGGAGTGGAGTGGAGTGGAGTGGAG	498
Db	398	CGACCTTGGACAGTGGCGGTGTATGCTGGGAGTGGAGTGGAGTGGAGTGGAGTGGAG	457
Qy	499	AGTGAAGGAGTATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT	555
Db	458	ATGTCGGTGTGCTGTCAGGACAAAGAGATTCCTGGGTTCCTGGGTTCCTGGGTTCCT	517
Qy	556	CCAATGCCCTTGGCGCCCGGCGGCTGGAGAGTGGAGTGGAGTGGAGTGGAGTGGAG	615
Db	518	TCAACAGATAGAGAACCTGATATCCAGGTGGAGGATTCGGATTCGAGCCATCTCTCT	577
Qy	616	CCAGTGCNAAGCAGATAGCCAGTGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAG	675
Db	578	CAACCTACCGCAAGCGCACCCCGTGGATGGAGGCTACGTGGAGTGAAGGAGGCAAGA	637
Qy	676	ACTGGCGGAGGTGTGACAGAGGCTGACCATGAACAGCAGAGGAGTGGTGGCGGA	735
Db	638	CCTGAAGCAGATCTGTGACAGAGCTGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAG	697
Qy	736	TGCTGGGCTTCCCGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAG	795
Db	698	TGTTTGGCTTCCCTGGGAGAGACATACAAATACAAAGTGTACAAA-----	745
Qy	796	TGAAGATGAGGAGCCCTAAGTCTAGGCTGAAGAGCCTGACGAATAGAACTCTTCTGGA	855
Db	746	-----TGTTTGGCTTCCAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAG	778
Qy	856	TCCACAGGTCACCTGCTGGGAGAGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAG	912
Db	779	CATTCTCCATGAGTGCACCGGAGAGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAG	838
Qy	913	TGCTCGAGCGGCGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAG	972
Db	839	AGGTGTCACTGGACCCCATGAAGATGTCCTGCGAGATGGGCTGCCGCGCTGGTGA	898

Qy	973	GCTGTGGGAGGCGCTCACTTGGCGCCACCGAGACAAAGCCACACGCAAGAGGCTCT	1032
Db	899	GTTCGTGCTGGCGAGCTTTCAGCCCTCAGGACCTTGAGATTCGGAAAGATACA	958
Qy	1033	GGGAGAGGAGCCAGGAGGTGGCGCTCGCGGGGCGCTGGTGGGAGGAGGCGGCTGG	1092
Db	959	AGCCAGAGCAACCCCTGGTGGCACTGAGAGGCGGTGGCTCATCGGAGAGGCTGGCTGG	1018
Qy	1093	AAGTCTCATCAACCGCAGTGGGCGACGGTCTCTGACGCAAGTGGAACTCATCTCTG	1152
Db	1019	AGGTCTCAAAAATGGAGATGGGGGACCGTCTCGCAGCAAGTGGAGCTGTGTGTGG	1078
Qy	1153	CCAGTGTGCTGT	1212
Db	1079	CCAGTGTGCTGT	1138
Qy	1213	GGTGGGCAAGGGCTAGGGCCATCCACCTGAGTGGAGTGGCGTGGAGGAGATATGAGG	1272
Db	1139	CACCTGGGCAAGGGATCGGACCCATCCACCTCAACAGATCCAGTGGACAGGCAATGAG	1198
Qy	1273	GGACCTCAGGCACTGCCCTGCCCTGGAGGTCCAGATGGTGGTGGTGGTGGTGGTGGTGG	1332
Db	1199	AGTCCATTTATAGACTGCAAGTTCATATGCCAGTCTCAG---GGCTGCAACCCACGAGGAGG	1255
Qy	1333	CTGCTGCTGT	1392
Db	1256	ATGCTGGTGTGAGATGCAACACCCCTGCTGCTGGCTGGTGGTGGTGGTGGTGGTGGTGG	1315
Qy	1393	GTGGGGGTATCCCTGAGGAGGGGCTATTGGAGGTGACGNGAGGTGAACTGGGGTCCCTAC	1452
Db	1316	GGGCGCGCAATCCCTACGAGGGCCGAGTGGAGTGGTGGTGGTGGTGGTGGTGGTGGTGG	1375
Qy	1453	GCTGGGGAGGT	1512
Db	1376	TGTGGGGAGT	1435
Qy	1513	AGCTCGGCTGGGTTTGGCCATCCATGCTTACAGGAACCTGTGTGTGTGTGTGTGTGTGTGT	1572
Db	1436	AGCTGGCTGGGATTCGCGCAGCAACCCCTCCAGAGGCTGTGTGTGTGTGTGTGTGTGTGT	1495
Qy	1573	CAAGGGCCAGGAGGT	1632
Db	1496	TCAACAGCAACAAAGTGGT	1555
Qy	1633	AGCAGTGGCAGAGGCGACGGGCGG---GTGCACTGTCTCCACGGTGGCGGGCTTCTGTG	1689
Db	1556	CGCACTGCGCGCCAGCAGCGGGAGGAGCTGGCTGCCCCAGGCGGAGTGCAGTACGAGG	1615
Qy	1690	CTGGAGTCTCTGT	1749
Db	1616	CGGAGTGTGCTGT	1675
Qy	1750	AGCGGCTTCTGT	1809
Db	1676	AGACCACTCTGT	1735
Qy	1810	GCCTCTCCAAAGTCTGGGATCACATGCACTGGGCTGTGTGTGTGTGTGTGTGTGTGTGTGT	1869
Db	1736	GCCTCTCGGCTCAGCGCGCGCAGACCCGACCCACCGAGTGTGTGTGTGTGTGTGTGTGTGT	1795
Qy	1870	TCTCCACACAGATCTCAATCTGGGCGGAGCTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGT	1929
Db	1796	TCTCTCTCCAGATCCAAACAAATGGCCAGTCCGAGCTTCGGCCCAAGAGCGGCGGACG	1865
Qy	1930	GCTGGTGTGGCAGCAGTGGCCAGAGGATACACAGGATTTGAGTGTGTGTGTGTGTGTGTGTGTGT	1989
Db	1856	GCTGGATCTGGCACTGT	1915
Qy	1990	ACCTCTCACTCTCAATGGCTCCAGGTGGCTGAGGGGACAAAGGCGAGGCTTCTGTGTGTGTGTGT	2049
Db	1916	ACCTCTCACTCTCAATGGCTCCAGGTGGCTGAGGGGACAAAGGCGAGGCTTCTGTGTGTGTGTGT	1975



2423 CTTGAGGTTGAGGATCCGATTCTCCAAACATCATTAATGAGGAGCGCTATGA 2482

DB 2285 TGGGACCGGCTCTGGCTGCACAACTGCCACAGGGA "TCATAC 2330  
2483 CGGCCACCGATCTGGATGTACAACTGCCACATAGGTGG "TCCTTC 2528

## RESULT 15

AADI9235 standard; DNA; 2714 BP.

XX AADI9235;

XX 18-DEC-2001 (first entry)

XX Human lipid metabolism related DNA #3.

XX Human; apolipoprotein; lipase; lipoprotein receptor; ALR; angina;  
XX cardiovascular disease; lipid metabolism; myocardial infarction;  
XX cerebral ischaemia; arterial thrombosis; thrombolytic; antilipemic;  
XX coronary artery thrombosis; cerebral artery thrombosis; stroke;  
XX intracardiac thrombosis; gene therapy; cardiovascular; vasodilator;  
XX neuroprotectant; cerebroprotective; ds.

XX Homo sapiens.

XX Key Location/Qualifiers

XX CDS 265..2574

XX FT /\*tag= a

XX FT /product= "Human lipid metabolism related protein"

XX WO200179446-A2.

XX 25-OCT-2001.

XX 16-APR-2001; 2001WO-US12529.

XX 14-APR-2000; 2000US-197137P.

XX 20-JUN-2000; 2000US-0596042.

XX 03-AUG-2000; 2000US-0631451.

XX 22-SEP-2000; 2000US-0667298.

XX 17-NOV-2000; 2000US-0714936.

XX (HYSE-) HYSEQ INC.

XX Ballinger DG, Loeb D, Montgomery JR, Tanj TY, Zhou P, Goodrich R;

XX Liu C, Asundi V, Zhao QA, Wehrman T, Dranac NT, Ren F, Qian XP;

XX Wang D;

XX WPI; 2001-611724/70.

XX P-PSDB; AAE11940.

XX Nucleic acids encoding human apolipoproteins, lipases, and lipoprotein  
XX receptor polypeptides useful for preventing diagnosing and treating  
XX lipid metabolism disorders, thrombosis and cardiovascular diseases

XX Claim 1; Page 255-256; 266pp; English.

XX The invention relates to polynucleotides encoding proteins CGL22, CGL29,  
XX CG95, CGL21, CGL162, CG27, CGL153 and CGL68 which are related to proteins  
XX involved in lipid metabolism and cardiovascular disease such as human  
XX apolipoproteins, lipases and lipoprotein receptor proteins. These DNA  
XX and protein sequences are useful for treating or preventing disorders  
XX associated with apolipoproteins, lipases and lipoprotein receptor (ALR)  
XX expression and for treating lipid metabolism, cardiovascular diseases  
XX and thrombosis. Antibodies against these proteins are useful for  
XX determining the presence of or predisposition to a disease associated  
XX with altered levels of these sequences. ALR polypeptides are also  
XX useful for identifying agents (agonists and antagonists) that bind to  
XX them and cells expressing ALR proteins are useful for identifying a  
XX therapeutic agent for use in treatment of pathology related to  
XX aberrant expression or physiological interactions of this polypeptide.  
XX Vectors comprising these DNA and protein sequences are also useful for

DB 1346 TCGGCGAGTGTGTCTGACAGAGAGTGGCTTTGGAGTGCACAAAGAGGAGCTACTGGC 1405

QY 1209 GCCCGCTGGGCGCAAGGGCTAGGCGCCATCCACTTGAAGTGGCTGCGCTGAGGGGATAT 1268

DB 1406 TCCGACTGGGCGAAGGATCGACCCATCCAGCTCAACAGAGATCCAGTGCACAGGCAAT 1465

QY 1269 GAGCGAGACCTCAGGAGCTGCCCTGCCCTGGAGGCTCCGAGATGGTCCACATGAG 1328

DB 1466 GAGAGTCCATTATAGACTGCAAGTTCAATGCCAGTCTCAG---GGCTGCAACAGAG 1522

QY 1329 AATGCTGCTGTGTGAGTGCATGTCCCTAACATGAGCTTTTCAAGATCAGGTCGGTTG 1388

DB 1523 GAGGATCTGTGTGAGATGCAACACCCCTGCCATGSGCTTGACAGAGAGCTGCGCTG 1582

QY 1389 GTTGTGGGCGTATCCCTCAGAGAGGGCTATTGGAGTGCAGGTCGAGGTCGACGGGTC 1448

DB 1583 AACCGCGGCGCAATCCTACAGAGGCGGAGTGGAGTGTCTGGTGGAGAGAAACGGTCC 1642

QY 1449 CCACGCTGGGCGAGCTGTGACAGTGAATACTGGGGCTCACCGAAGCCATGTTGGCTGTC 1508

DB 1643 CTTGTGTGGGAGTGTGTGTGGCCAAACTGGGGCATCGTGGAGGCCATGCTGTGCTGC 1702

QY 1509 CGACAGCTCGGCTGGTGTGTGTCATCCATGCTCAAGAGAACCTGCTGTGTGGCGGG 1568

DB 1703 CGCCAGCTGGGCTGGCATTCGCCAGCAACCGCTTCCAGAGACCTGTGTTATGGACGGA 1762

QY 1569 ACGCCAAGGCGCCAGAGAGTGTGTGATGAGTGGGGTCCGCTCAGGCAACAGAGTGGCC 1628

DB 1763 GATGTCAACAGCAACAAGTGGTCATGAGTGGAGTGAAGTGTCTCGGAAACGAGGTGTC 1822

QY 1629 CTGACAGAGTGGCCAGAGGACCGGGCGG---GTGCACTGCTCCACAGTGGCGGGCTTC 1685

DB 1823 CTGGCGCACTGCCGCCAGCAGCGGGAGAGCTGGCTGCTGCCCGGCGAGTGCAGTAC 1882

QY 1686 CTGCTGGAGTCTCTGATGAGCAGTGTGACCAAGACT---GGTATGAACGCCAGTGT 1744

DB 1883 CGGCTGGAGTGTCTGCTCAGAAACCGCCCTGACCTGGGTCTCAATCGCGAGATGAT 1942

QY 1745 GCAGAGACGGCTTACTTGGAGACCGCCGCTCAGCAGCTGATTTGTGCCACAGGA 1804

DB 1943 GCAGAGACCACTACCTGAGAGACCGGGCCATGTTCTGCTCAGTGTGCCATGAGGA 2002

QY 1805 GAACCTGCTCTCCAAAGTCTCGGATACATGAGTGGCCCTACGATACGCGGCTATT 1864

DB 2003 GAACTGCTCTCGGCTCAGCGCGGAGACCGACCCACAGCGGCTTACCGCGGCTCT 2062

QY 1865 GCGCTTCTCCACAGATCTCAATCTGGGCGGAGCTGACTTTCTGTCGAAGACTGGAGC 1924

DB 2063 GCGCTTCTCTCCAGATCCCAACAAATGGCCAGTCCGACTTCGGGCCAAGAACCGCG 2122

QY 1925 CGATAGCTGGGTTTGGCCACCACTGCGGAGTGTACAGAGATTTACAGAGTGTTCACCA 1984

DB 2123 CACCGGTGATCTGCGAGACTGTACAGAGCACTACACAGCATGGAGTGTTCACCCA 2182

QY 1985 CTACAGCTCTCTCACTCTCAATGCTTCAAGTGGCTGAGGGGCGACAGGCGGAGCTTCTG 2044

DB 2183 CTATGACCTGTGAACCTCAATGSCACCAAGGTGGAGGGGCGACAGGCGGAGCTTCTG 2242

QY 2045 TCTGAGGACACAAACTGCCCCACAGGAGTGTGAGCGGCTTACGATGTGCCAACTTTGG 2104

DB 2243 CTTGGAGGACACAGATGTGAAGGAGACATCCAGAGAAATTTACGAGTGTGCCAACTTCG 2302

QY 2105 AGACAGGAGTGTCTGAGTGTCTGGGACACTTACCGGATGACATTTGATTCGCACTG 2164

DB 2303 CGATCAGGAGCATCACATGGCTGTGGAGCATGTACCGCATGACATCGATCCAGT 2362

QY 2165 GGTGATATCACAGATGTGGGCGGCGGAAATATATCTTCAGAGTGTGTGAAACCCCA 2224

DB 2363 GGTGATCATCACTGAGTGTGCCCCCTGGAGACTACCTGTTCAGAGTGTGTATTAACCCCA 2422

QY 2225 CTATGAGTGGCAGAGTCAAGATTTCTCCAAACATATGCTGAGCTGCCGCTCAAGTATGA 2284



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Qy 2168 GGATATCACAGATGTGGCCCCCGGGAATTATCTTCCAGGTGATTGTGAACCCCACTA 2227
Db 2358 TCACATCACGGATGTGAAGCCAGGAACTACATCTCCAGGTGTGCATCAACCCAACTT 2417
Qy 2228 TGAAGTGGCAGAGTCAGATTTCTCCAACAATATGCTGCAAGTGGCGCTGCAAGTATGATGG 2287
Db 2418 TGAAGTAGCAGAGAGTGACTTTTACCACAATGCAATGAAATGTAACGCAATATGATGG 2477
Qy 2288 GCACCGGGTCTGGCTGCCAACAAGTCCACACAGGGAATTCATAC 2330
Db 2478 ACATAGAATCTGGGTGCACAAGTCCACATTTGGTGATGCCCTTC 2520

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Job time : 1390 secs